

CONSUMERS UNION *reports-*

**MARCH
1937**

1937 AUTOMOBILES

Ratings of 22 Low and
Medium Priced Models

SHEETS

With Ratings of 15 Brands

FACE POWDERS

Their Quality and Cost

NOSE DROPS

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FLOUR

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FLOUR WORKERS

**CANNED CHERRIES
AND ASPARAGUS**

FACT OR FABLE?

A Game for Consumers

**CONSUMERS UNION
OF UNITED STATES**

55 Vandam St. New York



CONSUMERS UNION *reports-*

VOLUME 2 NUMBER 2



MARCH, 1937

SENATOR COPELAND'S SELL-OUT

THE new food, drugs and cosmetics bill recently introduced in Congress by Senator Royal S. Copeland is—like his bills in previous sessions—as great a fraud as the worst of the business practices it is supposed to control. Its ultimate effect would be not the protection of consumers, but the protection of producers and advertisers of worthless and dangerous products. Newspapers report as this issue goes to press that President Roosevelt may oppose passage of the bill because of its weakness.

It is true enough that on some particular points the bill represents an advance over the present antiquated Food and Drugs Law of 1906. For example, the bill does extend government control to cosmetics and to advertising, neither of which comes within the scope of the existing law.

But consider the advertising section of the Copeland bill. It is this section in which the Senator has perhaps the greatest personal interest, since he has been well paid by patent medicine companies for assisting them in their radio advertising ventures. While the bill establishes penalties for all other violations, there are no penalties for false advertising. The Government may only seek an injunction in the courts to restrain the false advertising. (For other offenses, such as adulteration or misbranding, both penalties and injunctions are provided.)

Now the practical meaning of this would be that an advertiser could "try anything once," and continue to try it for a long period while a hopelessly cumbersome enforcement machinery was being brought into action. No matter how great his falsifications, the advertiser would have nothing to fear except an admonishment to go forth and sin no more. In view of the disposition of enforcement officials and the courts alike, probably only the most flagrant frauds would be stopped by injunction. And such injunction would come more times than not only after an advertising campaign had run its course and was ready to be abandoned for another campaign.

Of even greater significance with respect to advertising

is the provision that an advertisement shall be deemed false only when it "is not supported by persons who, by reasons of scientific training and experience, are qualified as experts on the subject to which such representation relates."

It can be stated without qualification that there is no statement national advertisers are likely to make so false that they could not buy the support of persons whose scientific training and experience *should* qualify them as experts. After all, one need only consider the career of the physician, Dr. Royal S. Copeland; of George F. Reddish, once a leading bacteriologist of the Federal Food and Drug Administration and now on the payroll of the makers of that outstanding hoax—Listerine; or of Dr. Frederick J. Cullen, formerly in charge of Drug Control of the Federal Food and Drug Administration, and now employed by the patent medicine manufacturers as contact man with Government enforcement agencies.

Every medicine manufacturer knows that no matter how worthless or dangerous his product, he can find some scientific reputations to support his advertising claims,

for a price. The *preponderance* of responsible, authoritative opinion, not the support of one or a few drug industry scientists, should determine the acceptability of advertising claims. Under this bill, a court could approve a claim if one highly paid expert supported it, though a hundred others considered it false.

Some provisions of the Copeland bill are in themselves satisfactory from the point of view of consumer protection. The Senator has, however, very carefully written in other provisions to assure that such consumer protection will rarely have any serious effects on the profits of any manufacturer wealthy enough to employ clever lawyers. And he has gone to great lengths to provide loopholes for business. For example: the opportunity for the manufacturer to confer with the Government before the commencement of any court action is made mandatory in this bill.

The bill further specifically provides that the Govern-

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FIFTEEN BRANDS of MUSLIN SHEETS

A report on what to look for when you buy a sheet and what you may expect to get for your money. Four out of 15 met Government specifications for strength; and the best-advertised brands did not prove to be the best buys.

THERE ARE SURPRISING DIFFERENCES in sheets. One of the most surprising is that four widely advertised brands proved decidedly inferior in this test to four brands that cost less. As with many other kinds of goods, it is evident that big names in advertising command big prices. The *Chatham Specification*, a newcomer on the market, was the only nationally advertised brand with a relatively low price.

For several years women have been increasingly persistent in demanding technical standards for textiles. Civic clubs, home bureaus, and consumer groups have acquired a working knowledge of thread counts and sizing, and insistence on technical labeling for sheets has already brought results. Among the advertised brands, *Chatham* has pioneered in presenting specifications. Two independent investigations have shown that the quality equals or exceeds the specifications. Cooperative Distributors publishes specifications in its catalog, and the sample tested by Consumers Union was found to meet the specifications given. Sears Roebuck and Montgomery Ward have adopted the same practice. For these two mail-order houses, the quality of better grade sheets surpassed the claims made for them, while that of lower priced lines was not so good as stated.

Quality grades of sheets are determined by their thread counts. Several grades of muslin and percale are commonly sold; the chief differences between the muslins and percales, as well as between the grades of each, are the

fineness of the cotton yarns and the number of threads in each square inch.

Sheets with thread counts of 64 by 64 (64 threads per inch in each direction) are known as low-thread-count or sometimes as Grade B muslins; those with 72 by 68 are known as high-thread-count or Grade A; while 86 by 94 is the count of a light percale. The Consumers Union test included eight brands of Grade B muslins and seven brands of Grade A, a number of the two grades coming from the mills of the same manufacturer. No percales were tested.

At the store, there are many significant signs of quality which the customer can look for—unless the sheet is sealed in cellophane. Naturally, a good sheet has no obvious imperfections in weave. Bumps or thin places cause uneven wear.

The sheet should feel heavy and firm without being heavily sized. Excess sizing can be detected by rubbing a corner between the fingers. If a white powder sifts out, the sheet has been unduly sized to enhance its appearance.

But the first rule in buying a sheet is to start in the bedroom by actually measuring the bed. Ample size will help to insure comfort and longer wear.

Although a 90-inch sheet may seem long enough for the average 74-inch mattress, consider actual requirements:

Mattress length	74 in.
Mattress ends (5 in. each) ..	10 in.
Shrinkage allowance	5 in.
Hems (labeled length is torn length)	5 in.
	<hr/> 94 in.

Obviously a 90-inch sheet will not do, unless bought for someone who has a penchant for exposing his toes to the cool night air. A 99-inch sheet would provide a 2½-inch tuck-in on each end, but still better would be a 108-inch length allowing 7 inches for tucking in or over at the ends.

A Report on Contraceptives

Because it is a field in which honest and reliable information is extremely difficult to obtain, Consumers Union has had prepared by a competent authority a report on contraceptives. As is customary in CU reports, both advertised and non-advertised products of all common types are discussed, and ratings given in terms of brand names. Since this survey is intended only for CU members who are married and who are seeking contraceptive information on the advice of their physicians, it will not be included in the *Reports*. It will be issued confidentially in pamphlet form.

Eligible members wishing to receive a copy should send 25 cents to Consumers Union, along with a letter stating that they fulfill the requirements given above. The report will be ready shortly.

BRAND	PRICE OF 81x108 SHEET	THREAD COUNT		TENSILE STRENGTH*		RESISTANCE TO ABRASION	PERCENT SHRINKAGE		PERCENT SIZING	WT. IN OZ. PER SQ. YD.
		WARP	FILL	WARP	FILL		WARP	FILL		
Sears' Lady Fair	\$1.20 ¹	75	71	75	83	Very Good	5.0	2.5	2.8	4.8
Penco	1.22	74	69	71	72	Good	5.0	1.0	1.1	4.8
Ward's Treasure Chest	1.32 ¹	80	68	70	74	Good	8.5	-2.5 ²	3.1	4.9
Fruit of the Loom	1.44	76	70	61	61	Good	2.5	1.0	0.8	4.8
CD	1.57 ^{1,2}	76	69	71	74	Fair	3.0	1.5	1.0	4.6
Chatham	1.10	72	64	64	59	Fair	3.5	none	5.4	4.5
Nation Wide	1.00	72	64	57	59	Fair	6.0	-2.0 ²	5.4	4.5
Sears' Launderite	1.00 ¹	72	61	52	51	Fair	4.0	-0.5 ²	9.3	4.6
Pequot	1.98	78	67	62	67	Good	5.0	none	0.5	4.8
Utica	1.98	75	69	64	70	Good	5.0	3.0	0.4	4.7
Lady Pepperell	1.98	76	69	59	75	Fair	3.5	1.0	0.4	4.6
Mohawk	1.41	72	63	61	51	Fair	4.0	-1.0 ²	1.0	4.2
Cannon	1.66	70	63	63	64	Poor	4.5	2.5	4.4	4.4
Ward's Longwear	1.09 ¹	72	59	41	44	Poor	3.5	1.0	6.1	4.4
Pepperell	1.47	72	60	48	43	Very Poor	6.5	-3.5 ²	6.3	4.4
Govt. Spec.		74	66	70	70					4.6

* After two launderings

¹ plus postage² price to non-members² indicates a stretch

RESULTS OF LABORATORY TESTS OF SHEETS

Hems are strongest when the stitches are small and even, rather than long or irregular. Sheets that have been torn into the desired lengths have even hems exactly parallel to the filling (crosswise) threads; cut sheets are less desirable. Closed ends on hems are an advantage, and tape selvages are superior to plain selvages.

What the buyer cannot determine for himself are the technical specifications that common merchandising sense should require on the label. There is always the possibility that the salesgirl may be able to give the facts; the experience of the Consumers Union purchaser indicates that the chance is remote indeed. We would be interested to hear of any member's success in getting complete answers on these points:

Thread count: The most common counts of muslins range from 58 by 56 to 72 by 72. Isabel Wingate of New York University, author of *Textile Fabrics*, considers 68 by 64 the lowest count for satisfactory wear. Specifications used by the Federal Government require not less than 74 by 66 in the actual finished sheet. Labeled thread counts are the number originally woven in the sheet; in finishing processes the original number is varied so that the final count is always somewhat different from woven count. Four sheets tested by Consumers Union fell slightly below a filling count of 64.

Minimum tensile strength: According to *Textile Fabrics*, minimum tensile strength of bed sheets should be 53 pounds in the warp and 50 pounds in the filling. Government specifications require 70 pounds each way. In the Consumers Union tests strengths ranged from 41 pounds in the warp and 44 in the filling to 75 pounds in the warp and 83 in the filling. Four sheets met the Federal requirements for strength in warp and filling.

Sizing: Sizing adds nothing to the value of the cloth, and will wash away in the first laundering. It is commonly used to make poor-quality sheets appear smooth and even. Wingate considers less than 1 percent desirable and more than 3.9 percent excessive. Sizing in Consumers Union tests ranged from 0.4 percent (*Utica* and *Lady Pepperell*) to 9.3 percent (*Launderite*).

Weight: Sheets vary from 3.25 to 5.25 ounces per square yard. A heavy

sheet is more comfortable, does not wrinkle easily, makes a neat-looking bed, and wears longer than a lightweight sheet of similar quality. On the other hand, too heavy a sheet is cumbersome in home laundering and somewhat more expensive when laundry is paid for by the pound. Lightweight sheets of good quality are durable. If the sheet seems lightweight, note whether it has loose, sleazy weaving or fine threads woven tightly. A fine, long-wearing percale sheet may weigh no more than a sleazy, poor-quality muslin. For long wear, a sheet should weigh not less than 4.6 ounces per square yard. Sheets in this test ranged in weight from 4.2 ounces to 4.9 ounces.

Shrinkage: Five percent shrinkage is usually considered allowable for fabrics of this type, although 4.5 percent is the maximum set by some authorities. In CU's test shrinkage ranged from 8.5 percent to 3.5 stretch.

Quality of cotton: The longer the cotton fibers and, up to a certain maximum, the more tightly they are twisted, the stronger the thread and the smoother the finish. Short fibers loosely twisted rough up and make the sheet look dingy and soiled after a short time, and are an indication of poor wearing qualities.

Prices quoted in the ratings are for an 81 in. by 108 in. sheet.

Pepperell's Famous Question
"Mother, what's the difference
in sheets?"

Consumers Union's Answer
"Lady Pepperell, my dear,
costs about 50 percent more
than Lady Fair, and isn't quite
so good a sheet."

Best Buys

Sears' Lady Fair (Sears, Roebuck spring catalog). \$1.29 plus postage. Sheet tested was ordered from fall catalog, at \$1.22; specifications in both catalogs are identical; had well balanced thread count; highest tensile strength and resistance to abrasion of all sheets tested; and met Government specifications.

Penco (J. C. Penney stores). \$1.22. Well balanced tensile strength. Good resistance to abrasion. Meets Government specifications.

Also Acceptable

(Listed in approximate order of merit based on the price given; higher or lower price would change a sheet's relative position).

Ward's Treasure Chest (Montgomery Ward spring catalog). \$1.32 plus postage. Sheet tested ordered from fall catalog, at \$1.22, under the name *Supreme Quality*; specifications in current catalog higher than in the old. Would have been rated a *Best Buy* had it not had excessive lengthwise shrinkage and crosswise stretch. It had good resistance to abrasion. Met Government specifications.

Fruit of the Loom (B. B. and R. Knight Corp., Providence, R. I.). \$1.44. Well balanced tensile strength. Good resistance to abrasion.

CD Cat. No. 204 EA 383 (Cooperative Distributors, NYC). \$1.57 (\$1.50 to members) plus postage. Well balanced tensile strength. Fair resistance to abrasion. Meets Government specifications.

Chatham "64" Square Specification (Chatham Mfg. Co., NYC). \$1.06. Too much sizing, but good tensile strength and resistance to abrasion considering price.

Nation Wide (J. C. Penney stores). \$1.00. Well balanced, though low, tensile strength. Excessive shrinkage and sizing. Fair abrasion resistance.

Sears' Launderite (Sears Roebuck spring catalog). \$1 plus postage. Sheet tested was ordered from fall catalog, at 89c; specifications identical in both catalogs; had well balanced, though low, tensile strength, excessive sizing, fair abrasion resistance.

Pequot (Naumkeag Steam Cotton Co., Salem, Mass.). \$1.98. Well balanced tensile strength. Very little sizing. Good resistance to abrasion. Did not meet Government specifications after two launderings.

Utica (Utica and Mohawk Cotton Mills, Inc., Utica, N. Y.). \$1.98. Very little sizing. Good resistance to abrasion. Good strength.

Lady Pepperell (Pepperell Mfg. Co., Biddeford, Me.). \$1.98. Very little sizing. Fair resistance to abrasion. Did not meet Government specifications, as advertised.

Mohawk (Utica and Mohawk Cotton Mills, Inc., Utica, N. Y.). \$1.41. Fair resistance to abrasion.

Cannon (Cannon Mills, NYC). \$1.66.

Well balanced tensile strength. Poor resistance to abrasion.

Not Acceptable

Ward's Longwear (Montgomery Ward spring catalog). \$1.09 plus postage. Sheet tested was ordered from fall catalog, at 89c; new specifications slightly higher than old, and if new sheet is only correspondingly better, it does not warrant higher rating. Had poor tensile strength, excessive sizing, poor resistance to abrasion.

Pepperell Regular (Pepperell Mfg. Co.). \$1.47. Unacceptable tensile strength. Excessive shrinkage and sizing. Poorest abrasion resistance.

FACT or FABLE?

THE MOST EFFICIENT CONSUMER Is the most intelligent consumer. Mark that statement true. So here's an intelligence test for you to put you on your consumer's toes. Take it as a game, but play it as a game with a point. Answering the twelve questions below (try them on your friends) should interest and amuse you; it ought to contribute to your usable information, too.

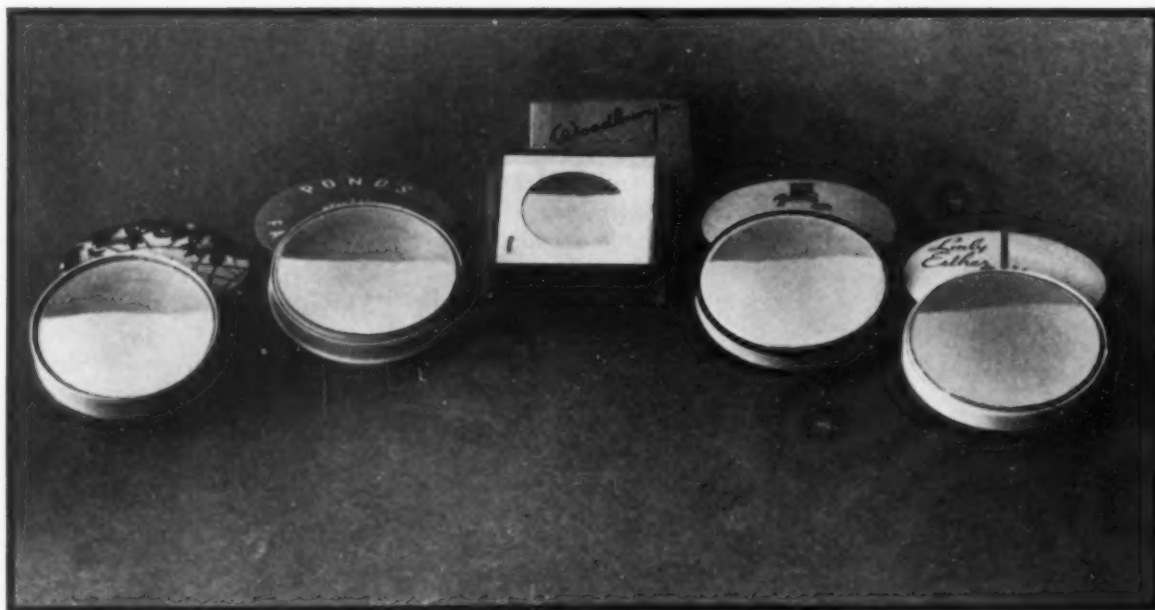
If enough of you like this game and let us know about it, we'll make it a regular monthly feature. Now read the questions. Mark them "True" or "False." Then turn to page 13 for the answers. If you get them all right, you're good. If you get nine or more, you're pretty good. If you get less than nine, you've probably got a bad case of "advertisement fatigue" and had better mend your ways.

1. Tooth powder is a better buy than tooth paste.
2. A heavy all-wool blanket is always warmer than a lighter one.
3. The real reason for many of our everyday ailments is too little alkali in our system.
4. A great many oranges are treated with ethylene gas because:
 - a. Ethylene gas improves taste.
 - b. Ethylene gas is good for you.
 - c. Treating an orange with ethylene gas will make it last longer.
 - d. Ethylene gas will make a green orange look ripe.

e. Ethylene gas is a good carrier of vitamin D.

5. *Good Housekeeping's* Seal of Approval, although it has been given to a few questionable products, is by and large a reliable guide to quality.
6. It is unfortunate but true that you can't get a good fountain pen for much less than five dollars.
7. If you bought only union-made products it would not be difficult to buy a good radio set.
8. Kolynos toothpaste cannot make teeth "three shades whiter in three days" but it may make them two shades whiter.
9. The Pure Food and Drugs Act proposed by Senator Royal S. Copeland specifically forbids advertising a product as a cure for syphilis, but says nothing about advertising a product as a cure for diabetes.
10. As a source of vitamin C, tomato juice is generally less expensive than orange juice.
11. Most good automobile tires at present deliver the maximum mileage possible under known manufacturing methods.
12. Generally speaking, the best cuts of meat have considerable fat distributed through them.

FACE POWDERS



SEE WHAT HAPPENS WHEN YOU TAP THE BOX

A test of 37 brands reveals that most are safe and adequately effective, that practically all are outrageously over-priced.

IT IS TRUE OF THE GREAT BULK OF face powders, as with most cosmetics, that they are outrageously over-priced. It is true of a fair number of them that they may tend to dry the skin, and for some people prove irritating. But—to give them their due—most face powders are both safe for use and adequately effective in doing what they are supposed to do. They will not “clog the pores” nor set up that dread condition known as “cosmetic skin,” which the makers of Lux soap are so anxious to cure. They will not cause blackheads. They will not grow hair on the face, inasmuch as there is no known substance which will grow hair any place.

A face powder has two main functions. It covers up minor blemishes and the skin's shine, adds some coloration, and thus leads to that synthetic complexion which advertising copywriters refer to variously as “glorious,” “glowing,” “youthful” and “devastating.” Since it forms a thin film over the skin, it may also serve as a slight protection against exposure to

the weather. What the copywriters say further about the mysteries of the colors used may be dismissed as 99 44/100 percent nonsense.

A number of years ago lead compounds were a common ingredient of face powders, but we do not believe that these very poisonous compounds are any longer used in face powders made in the U. S. They were used in the first place because they gave the powder its “covering” power, its efficiency in hiding evenly the underlying skin. Several substances have taken their place, the most common being zinc oxide and titanium dioxide, neither of which is harmful.

Tremolite—a mineral substance with sharp particles once found in many face powders—is likewise found no more. Starch, in fact, is the only undesirable ingredient that you are apt to find in a face powder on the market these days. That ingredient, generally either rice or corn starch, tends to dry the skin. In addition, it may be irritating to some people with allergies to it. The most offending form of starch

on this count—orris root—was not found in any of the powders tested. But no manufacturing necessity exists for using any form of starch. In consideration of its drying effect, all powders containing it were rated “Not Acceptable.”

The pricing policies of the face powder manufacturers are little short of fascinating. The Bureau of Health of Maine did some figuring on the subject a while ago and emerged with the interesting statistics that follow:

BRAND	INGREDIENTS	CONTAINER	SELLING PRICE
Coty	7c	5c	\$0.75
Elizabeth Arden	23c	16c	3.00
Harriet Hubbard Ayer	4c	3c	.60
Daggett & Ramsdell	5c	5c	.85
Helena Rubinstein	4c	6c	1.00
Luzier's	3c	5c	1.00

A most interesting set of figures to line up with the others, if it were obtainable, would be the one relating to advertising costs.

Unwarranted price alone, however,

is not the face powder manufacturer's only means of gypping the consumer. Slack-filled containers, false bottoms, and all the deceptions of the "shrewd merchandiser" are used to the hilt. The boxes shown in the accompanying picture appear to be quite full so long as they lie flat, as they do on a counter. See what happens when they are tilted and tapped slightly to make the powder settle. Probably the most bald-faced example of such technique is provided by the estimable firm of Coty. Thanks to a false bottom and a greatly over-sized lid, the small box of Coty powder contains less than one-third the amount it appears to contain.

In the Next Issue

Consumers Union has found it necessary to make additional tests for its report on higher priced radio sets (above \$60), originally scheduled for this issue. These sets will be covered in the April issue, along with reports on *Washing Machines, Higher-Priced Automobiles, Cold Creams, Men's Shirts*, and other products. There will also be a special article on *Gardening*.

Best Buys

Embassy (Embassy, Ltd., NYC). 20c a box. Excellent adherence and coverage. 11.6c per oz.

Cashmere Bouquet (Colgate-Palmolive-Peet, Jersey City). 50c a box. Excellent adherence. 12.2c per oz.

Small size, 10c a box; 14.1c per oz.
CD (Cooperative Distributors, Inc., 30 Irving Place, NYC). 60c (50c to members) per box. Adherence and coverage good. 13.2c per oz. (members); 15.9c (non-members).

Also Acceptable

(In order of increasing cost; but note comments)

Bourjois Poudre Java (Bourjois, Inc., NYC). 50c a box. Coverage and adherence only fair. 17.3c per oz.

Lady Esther (Lady Esther Co., Evanston, Ill.). 50c a box. Coverage excellent, adherence poor. 18.2c per oz. Small size, 10c a box; 27.8c per oz.

Kissproof (Kissproof, Inc., NYC). 10c a box. Excellent adherence, poor coverage. 18.9c per oz.

Luxor (Luxor, Ltd., NYC). 50c a box. Excellent adherence. 19.4c per oz.

Marvelous (Richard Hudnut, NYC). 55c a box. Excellent coverage. 20.7c per oz.

Woodbury's (John H. Woodbury, Inc., Cincinnati). 50c a box. Excellent coverage. 20.8c per oz. Small size, 10c a box; 22.5c per oz.

Cheramay Poudre Joli Soir (Cheramay, NYC). 20c a box. Excellent coverage. 21.0c per oz.

Luxuria (Harriet Hubbard Ayer, NYC). \$1.00 a box. Excellent adherence. 24.6c per oz.

Armand Cold Cream Powder (The Armand Co., Des Moines). \$1.00 a box. Coverage excellent. 24.8c per oz.

Ybry (Ybry, Paris). 25c a box. 26.3c per oz.

Max Factor (Max Factor and Co., Hollywood, Calif.). \$1.00 a box. Excellent coverage. 26.5c per oz.

Edna Wallace Hopper (Edna Wallace Hopper, Inc., Chicago). 10c a box. Excellent adherence. 28.6c per oz.

April Showers (Cheramay). 75c a box. 30.4c per oz. Small size, 10c a box; 36.6c per oz.

Outdoor Girl Olive Oil Powder (Crystal Corp., NYC). 25c a box. 30.9c per oz.

Tangee (The George W. Luft Co.,

NYC). \$1.00 a box. Adherence and coverage excellent. 33.2c per oz. Small size, 10c a box; 31.6c per oz.

Daggett & Ramsdell (Daggett & Ramsdell, NYC). \$1.00 a box. Excellent coverage. 32.2c per oz.

Princess Pat (Princess Pat, Ltd., Chicago). \$1.00 a box. Unusually good coverage. 33.3c per oz. Small size, 10c a box; 37.7c per oz.

Dorothy Gray Salon Powder (Dorothy Gray, NYC). \$1.00 a box. Poor coverage and adherence. 33.3c per oz.

Pompeian Beauty Powder (The Pompeian Co., Bloomfield, N. J.). 55c a box. Poor coverage and adherence. 34.0c per oz.

Chiffon (Primrose House, NYC). \$1.00 a box. Excellent coverage and adherence. 34.1c per oz. Small size, 10c a box; 27.2c per oz.

Coty Poudre de Beaute (Coty, NYC). \$1.00 a box. Excellent coverage. 35.9c per oz. Small size, 10c a box; 49.3c per oz.

Drezma (Drezma, NYC). 10c a box. 40.6c per oz.

Barbara Gould (Barbara Gould, NYC). \$1.00 a box. Coverage excellent. 42.4c per oz.

Houbigant Quelques Fleurs (Houbigant, NYC). \$1.00 a box. 42.5c per oz.

Yardley English Complexion Powder (Yardley, London). \$1.00 a box. Adherence excellent. 43.6c per oz.

Evening in Paris (Bourjois, NYC). \$1.10 a box. Excellent coverage. 44.0c per oz.

Du Barry (Richard Hudnut). \$2.00 a box. Excellent coverage. 57.4c per oz.

Prince Matchabelli (Prince Matchabelli, NYC). \$2.50 a box. Excellent adherence. 67.5c per oz.

Not Acceptable

(The following brands were found to contain starch)

Irresistible Face Lure Powder. 10c a box. Contained corn starch. 5.9c per oz.

Gladys Glad. 20c a box. Contained rice starch. 11.4c an oz.

Pond's. 35c a box. Contained rice starch. 21.2c per oz. Small size, 10c a box; 29.8c per oz.

Djer Kiss. 50c a box. Contained corn starch. 27.3c an oz. Small size, 10c a box; 24.6c per oz.

Helena Rubinstein. \$1.00 a box. Contained rice starch. 37.4c an oz.

Poudre d'Illusion (Elizabeth Arden). \$1.75 a box. Contained corn starch. 59.1c an oz.

Study Outline

IN THE DECEMBER REPORTS WE ANNOUNCED briefly a monthly study outline prepared for CU members in the educational field, to be based on the monthly *Reports*. The response to this announcement has been so gratifyingly large that we give here a more detailed description of the service.

The outline is sent on request, without charge, to CU members who are teachers, group or club leaders, trade-union or cooperative educational directors, and who conduct classes or study groups in consumer education. It follows closely the articles in the *Reports*, and regularly contains suggestions for simple tests of consumer goods. Material is arranged under convenient headings, rendering the outline suitable for a wide variety of uses: for economics, home economics, general science, and marketing courses in high schools and colleges; for women's clubs; for cooperative and consumer clubs; for county consumer institutes; and for other more informal groups. From time to time, projects of interest will be charted (e.g., a survey of buying habits).

The outline is of greatest use where all students in a class or all members of a club receive copies of the *Reports*. But it can be used satisfactorily even though only the teacher or group leader subscribes. If you feel that you can make use of this service, mail a card to CU, telling whether you are an individual member or a group member, noting the subject you teach or the type of club to which you belong, and stating definitely whether you want to start with the next outline or with one of those already issued.

CU'S Group Rates

Yearly membership, which brings a year's subscription to the monthly *Reports* and the annual *Buying Guide*, is offered to groups of 15 or more at \$2 per person for the complete edition, 50 cents for the abridged.

To obtain these special rates, the group must designate one person to receive the *Reports*, which will be mailed in bulk. All subscriptions must start with the same issue.

NOSE DROPS

A digest of medical opinion on the possible dangerous effects of mineral-oil nose drops administered to children.

SINCE THE PUBLICATION OF CONSUMERS Union's original report on the hazards of mineral-oil nose drops (in the *Reports*, December, 1936) many members have written in to say that their physicians disagree with our conclusions and insist that we saw fire where there was not even smoke. Our conclusions were (1) that mineral oil dropped into the noses of children, especially very young children, may be drawn into the lungs, where it may collect, causing irritation, inflammation and chronic pneumonia, leading often to acute pneumonia and death; (2) that mineral-oil nose drops are in any event of little or no value; and (3) that these facts should be known.

We also pointed out that "fats and oils administered by mouth can be equally damaging. Cod-liver oil or mineral oil forced into the child's mouth against his will and causing choking or vomiting can get into the lungs. Even milk-fat can be responsible." We thought that these facts, too, should be known.

Apparently these facts are so little known that our two-page report was insufficient to make our stand and the reasons for it clear. That members and their physicians both may be able to judge more fully the validity of what we say, we present here a digest of opinion by additional authorities.

Ikeda

Dr. K. Ikeda (*American Journal of Diseases of Children*, published by the American Medical Association, April, 1935; pp. 985-1006).

"Observation at necropsy [post-mortem] of a peculiar pneumonia in infants which is believed to be a result of accidental aspiration of oil substances has been recorded infrequently. However, in the light of critical study of this condition as revealed in 7 necropsies of my own and of the data obtained on experimental animals, one is led to conclude that this is a distinctive pneumonia of relatively common occurrence, in which not only does the

aspiration of oil play a dominant etiologic [causative] role but the clinical history and the pulmonary lesion are sufficiently constant and characteristic to merit its consideration as a clinico-pathologic entity."

The author discovered seven cases of oil-aspiration pneumonia in 101 consecutive necropsies performed on children—an incidence of nearly 7 percent. He emphasizes that in none of these cases was oil-aspiration pneumonia recognized until the microscopic sections were rechecked with this possibility in mind.

The author reviews the cases and studies appearing in medical literature since 1925. All but one of the cases occurred in children.

"Accidental aspiration of oils in these infants," writes Dr. Ikeda, "is understood to take place either following the instillation of nasal drops containing such vehicles as liquid petrolatum and olive oil or with the administration (usually forced) of cod liver oil, castor oil, liquid petrolatum, etc."

The author repeated the experiments of Pinkerton who, in 1928, introduced various oils into the lungs of rabbits and noted their effects on the tissue. Liquid petrolatum (mineral oil or albolene), Dr. Ikeda says, appeared to stimulate a chronic reaction of the tissue cells more readily than other oils. In combination with certain drugs such as menthol, he notes, "it may induce proliferative activity [abnormal growth] of the epithelium as well as acute inflammatory reaction."

Karelitz and Denzer

Drs. Karelitz and Denzer (*Journal of Mount Sinai Hospital*, May-June, 1935; pp. 6-10).

The authors describe an instance of lipoid pneumonia in an infant who had been receiving mineral oil by mouth. Diagnosis was made on the basis of a careful review of the history and course of the illness. They emphasize the failure of proper development and growth of the child and

recall the observations of Goodwin (*American Journal of Diseases of Children*, V. 48, 1934; p. 309) who stated that "stunting of growth is so often associated with the active phase of lipoid cell pneumonia as to make one feel it to be part of the clinical picture." The authors' patient was also undernourished and they state, "... there is reason to believe that the lipoid pneumonia itself may be responsible for the persistence of the malnutrition."

They conclude that "the realization that even customary instillation of nasal drops and administration of oils by mouth may permit the aspiration of oil into the lungs, no doubt, will modify our (therapeutic) procedures."

Boyd

Prof. Wm. Boyd ("Pathology of Internal Diseases," 2nd edition, 1935; p. 168).

"It sometimes happens that in children whose throats have been sprayed for some time with preparations of oil, a pneumonia-like condition of the lung develops. I have seen the same thing in an adult whose throat had been sprayed repeatedly with olive oil and liquid petrolatum."

Ball

Dr. Fred E. Ball (*Illinois Medical Journal*, January, 1936; p. 62).

The author collected 45 cases of lipoid pneumonia in infants and children up to 7 years of age, reported up to 1936. He reports a case of his own in an elderly male who had been using mineral-oil spray for many years and who died of bronchopneumonia.

"Microscopically," writes Dr. Ball, "it could be shown that the presence of the oil had produced some lesions that appeared to be very recent and others in which the oil was encapsulated by dense scar tissue. This would indicate that the accident had been repeated over a long period of time."

The author stresses the point that "oil put into the nose or throat can get into the lungs without any cough or obvious symptoms." Also that "oils once reaching the lungs can set up a very definite pathological reaction which can be recognized microscopically." Further, that "infection at times does develop around this reaction and the whole process may lead to death."

Goodwin

Dr. T. Campbell Goodwin ("Practice of Pediatrics," Vol. 2, 1936; chapter 49).

Dr. Goodwin, who was one of the first physicians to emphasize the importance of lipoid pneumonia, says: "Since a large proportion of the cases of lipoid pneumonia occur during some other illness, the clinical picture is colored by the accompanying condition."

"Weak infants are most apt to be affected and usually they have been given oily nose drops or liquid petrolatum for constipation. Many of them have struggled against taking cod-liver oil or have been difficult feeders who vomited frequently. In strong infants and older children some coincident illness . . . is likely to be present."

Brennerman

Dr. Joseph Brennerman, Chief of Staff, Children's Memorial Hospital, Chicago, Ill. ("Practice of Pediatrics," Vol. 2, 1936; chapter 39).

The author discusses the treatment of respiratory infections of children. Speaking of nose drops generally, he writes:

"Local antiseptics such as nose drops have at best a doubtful value. In watery, non-isotonic solution they may even do harm to the delicate nasal mucous membrane. At most they reach only a small part of the involved area as usually administered. I have never used them."

Needless Risk

From the evidence offered above it would seem clear that mineral-oil nose drops represent at one extreme a plain waste of money, and at the other, a serious hazard. With weak or very young children, their use is particularly indefensible; but to use them at all is to run the needless risk of dangerous consequences. It must be remembered that the effects of oil aspirated into the lungs have only recently begun to receive the study they manifestly deserve. What future study will show, in terms of the extensiveness of the effects, is conjectural. The important thing to know now is that mineral-oil nose drops have already been amply shown to be too dangerous for general use; and too useless to warrant purchase.

Short Story

ON THE FIRST DAY OF FEBRUARY, AT 12:45 P.M., Mr. Hawthorne Winner, resident of New York City, opened a can of Sheffield Sealect milk, one of two he had bought at a grocery store a few days before. He looked at it. He tasted it. It was sour. Thereupon Mr. Winner inspected the other can. It was sprung. So Mr. Winner took himself and both cans back to the grocery store. What, he inquired, could the grocer do about this state of affairs? The grocer was sorry, but he couldn't do a great deal. He could take back the unopened can, but not the opened one; for Sheffield, said he, would not give him credit. Sheffield, added the grocer, did not inspect its cans from time to time as other dairy companies did.

So Mr. Winner took his cans and broodingly departed. A few minutes later he was talking over the telephone to Sheffield's claim department. What, he inquired, was Sheffield going to do about this state of affairs? Sheffield, said the gentleman on the other end of the wire, wasn't going to do anything. Nothing? asked Mr. Winner. Nothing, said Sheffield's man.

So Mr. Winner took his cans and went to the Milk Consumers Protective Committee.* After that, he got Sheffield on the wire again, telling them that the Milk Committee now had the cans and that. . . . But Mr. Winner didn't get any further. The Sheffield people wanted Mr. Winner to know right then and there that they were very sorry, that there must have been some dreadful mistake, that he could count on Sheffield to straighten things out, and what was Mr. Winner's home address?

The day following, by special delivery, Mr. Winner received not two but four new cans of milk, accompanied by fourteen pencils each bearing the Sheffield trademark and a little legend that read thus: "Use this pencil to order Sheffield's Sealect, the best evaporated milk."

* The Milk Consumers Protective Committee was set up last year originally under the sponsorship of Consumers Union to help consumers get fair treatment from the dairy companies.

FAMILY CAKE

FLOUR

BISCUIT PANCAKE

WHITE FLOURS SOLD TODAY DIFFER chiefly in the quality and quantity of their protein content. Gluten, the most important of the proteins, has elastic properties which give the dough its rubbery texture. Whether a flour is better adapted to bread-making or cake-making depends upon the amount and type of gluten in it.

Hard wheat flour, which has a high gluten content, is preferred for bread. Made with this flour, the dough can hold the large amount of gas formed by the yeast plants without rupture of the walls. A flour that will produce dough which does not break is said to have "strength." Much of this high-gluten type was marketed in the days of bread-making in the home, but is now sold mainly to commercial bakers.

The *general* or *family* flours which are now widely sold are usually blends of hard and soft wheat flour. For biscuits, hot breads, and the heavier pastries, such a mixture is very satisfactory. But anyone using it for bread will find that the dough does not rise as it did in the old days when grandmother baked bread and the baking companies wrapped celluloid flags of the nations with each loaf.

Cake flour, on the other hand, is made entirely of soft wheat. Lacking the strength of bread flour, it tends to make a light dough which ruptures easily. The texture of the cake will be fine, however, and if used with baking powder or soda, this type of flour is satisfactory.

A simple way to distinguish bread flour from cake flour is to press a small amount of each between the fingers. Cake flour holds its shape; bread flour does not.

Four grades of wheat flour are marketed: patent, straight, clear, and low-grade. Straight-grade flour is usually

made from all of that portion of the wheat grain (about 70 percent) that can be made into white flour.

Patent flour, the highest grade commonly sold, is selected from the 65 to 85 percent of the white flour (straight-grade) that is of best quality; the remainder is sold either as clear or low-grade flour, the latter grade often including only the poorest portion.

It is interesting to note that white flours increase in protein and mineral content as the quality decreases. This is because more of the outer part of the grain is included in lower grades.

Pies bought from the baker's wagon or in restaurants are likely to have top and bottom crusts made with different kinds of flour. The tough layer beneath is often baked with flour that is not easily penetrated by the juicy filling, and is able to withstand rough treatment during delivery. The top crust, by which the purchaser judges the pie, is likely to contain a flour which will create a light and flaky appearance.

Storage of flour in a warm, damp place is an invitation to weevils. These insects develop from eggs often present in flour when it reaches the consumer, but there is no way for the buyer to discover the infestation until the weevils appear. Distributors who find weevils in their stock merely sift them out and sell the flour, along with any eggs that remain, to the consumer. White flour seldom is attacked by weevils; the insects prefer whole-wheat or buckwheat flour. Store flour, after it has been opened, in a covered container in a cool, dry place.

None of the flours tested was a real bread flour, although *Heckers* and *Pride of St. Louis* produced relatively strong doughs. Strong dough is not, however, especially desirable, since little bread is baked at home. No flour

tested showed any individual character with respect to taste, which is, in any case, modified by the ingredients added.

Cake Flour

Although the cake flours in the test varied widely in individual characteristics, a composite of these characteristics shows all of them to be acceptable. For ratings, chemical analyses were considered secondary to the standard baking tests. These included observations of the dough quality, the amount of rise, the texture of the cake produced, and the flavor of the finished product. All these flours are made of soft wheat, giving them the low gluten content which is desirable for cake flours. They are satisfactory for making pastries only when baking powder is used.

Self-rising Cake Flour

This is cake flour to which baking powder has been added, so that no leavening agent is required. The type is not acceptable, particularly since the added baking powder is almost invariably of the alum type (see "Baking Powder," CONSUMERS UNION Reports, November, 1936). In addition, these flours generally deteriorate upon standing, becoming musty and acquiring a stale odor.

Prepared Biscuit Flours

These flours consist generally of a mixture of flour, sugar, skim-milk powder, shortening, baking powder, and salt, and require only the addition of milk or water to make a biscuit dough. From the health standpoint, it would be desirable to limit their use. The baking powder in them is generally of the alum type, and the shortening is generally cottonseed oil which

has been hardened by treatment with hydrogen. Such shortening helps protect the biscuits against deterioration, but it can cause digestive difficulties.

The flours tested were well packed. They should keep for a long time if their wrappers are not unsealed.

Pancake Flours

Pancake flours range from white flour to the old-fashioned dark buckwheat. As with cake flours, the most important consideration is the quality of the finished product. Rise of the dough, color, texture, and flavor were all taken into account in preparing the ratings.

The much advertised *Aunt Jemima* was the poorest of those tested. The technical report stated: "Its batter is not smooth and even, its texture is loose and porous; and its appearance is poor and its taste decidedly flat."

The rating of the flours was based on the following factors: the color of the flour, the volume of dough produced, the amount of moisture absorbed, and the baking quality. The last was determined in actual baking test by standard methods.

Moisture, a natural ingredient of flour, is paid for by the consumer; hence, from the point of view of economy, the amount of moisture in the flour is important. The ratings in this report are based, therefore, on the cost per pound of dry flour.

Family Flours

Best Buy

Sunnyfield Family Flour (Distributed by A&P, NYC). 5.5c per lb. dry flour. Price, 17c for 3½ lb.

ard Milling Co., NYC). 7.5c per lb. dry flour. Price, 23c for 3½ lb.

Pillsbury's Best Flour (Pillsbury Flour Mills, Minneapolis). 7.5c per lb. dry flour. Price, 23c for 3½ lb.

Also Acceptable

Gold Medal Flour (General Mills, Inc., Minneapolis). 6.7c per lb. dry flour. Price, 21c for 3½ lb.

Heckers Superlative Flour (Stand-

Not Acceptable

Pride of St. Louis Flour (Distributed by James Butler Grocery Co., NYC). 6.2c per lb. dry flour. Poor mill grade. Price, 19c for 3½ lb.

Cake Flours

Best Buy

Co-op Delicake Flour (Distributed in eastern states by Eastern Cooperative Wholesale, NYC, which can supply addresses of retail stores). 8.8c per lb. dry flour. Price, 27c for 3½ lb.

Softasilk (General Mills, Inc., Minneapolis). 11.1c per lb. dry flour. Price, 27c for 2¾ lb.

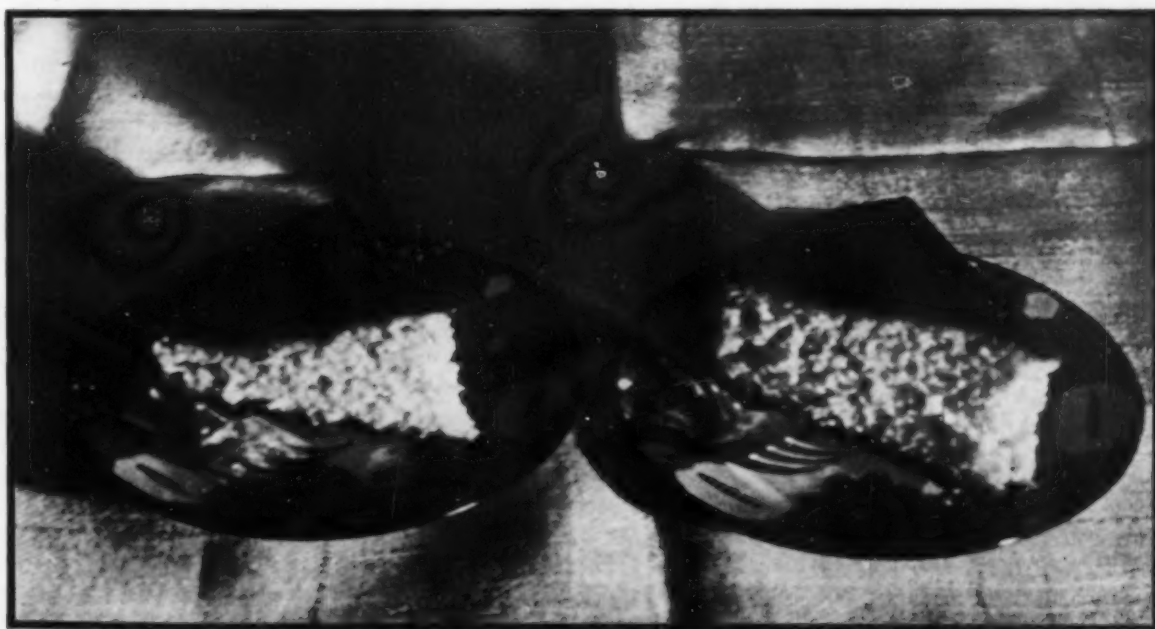
Swans Down (Igleheart Bros., Inc., Evansville, Ind.). 12.9c per lb. dry flour. Coarse texture. Price, 31c for 2¾ lb.

Co-op Cake and Pastry Flour (Distributed by Eastern Cooperative Wholesale; see *Co-op Delicake*). 6.8c per lb. dry flour. This is an excellent buy for making biscuits, pies, etc., but is not satisfactory where a fine texture is desired. May be substituted for a family flour, except in cases where yeast is to be used as leavening agent. Price, 21c for 3½ lb.

Also Acceptable

Macy's Lily White Cake Flour (Distributed by R. H. Macy Co., NYC). 13.5c per lb. dry flour. Price, 24c for 2 lb.

Sno-Sheen (Pillsbury Flour Mills Co., Minneapolis). 12.0c per lb. dry flour. Price, 29c for 2¾ lb.



THESE CAKES WERE BAKED UNDER IDENTICAL CONDITIONS.

But this was baked with family flour.

And this was baked with cake flour.

Self-rising Cake Flour**Not Acceptable**

Presto Self-Rising Cake Flour (Hecker-H-O Co., Buffalo). 12.0c per lb. dry flour. Contains slightly more baking powder than necessary for such soft flour. Price, 29c for 2¾ lb.

Prepared Biscuit Flours**Acceptable**

Minitmix (Pillsbury Flour Mills Co., Minneapolis). 11.7c per lb. dry mix. Flavor good; batter smooth. Price, 27c for 2½ lb.

Not Acceptable

Bisquick (General Mills, Inc., Minneapolis). 13.7c per lb. dry mix. Flavor only fair. Poor all around as compared to *Minitmix*. Price, 31c for 2½ lb.

Pancake Flours**Best Buy**

Sunnyfield Pancake Flour (Distributed by A&P, NYC). 7.1c per lb. dry flour. Flour is very light buckwheat, yielding pancakes of excellent flavor and texture. Price, 8c for 1¼ lb.

Also Acceptable

CD Buckwheat Pancake Flour (Distributed by Cooperative Distributors, Inc., 30 Irving Place, NYC). 10.0c per lb. dry flour (9.5c to members) exclusive of postage. Price 44c (42c to members), plus postage, for 5 lb. Excellent flavor; good texture.

Pillsbury's Pancake Flour (Pillsbury Flour Mills, Minneapolis). 8.8c per lb. dry flour. Good texture; flavor, fair. Price, 10c for 1¼ lb.

Macy's Lily White Buckwheat Flour (Distributed by R. H. Macy Co., NYC). 16.4c per lb. dry flour. This is a dark buckwheat flour, for those who like the old-fashioned type of pancake. It has a strong buckwheat flavor and good texture, but the price is far too high. Several weevils were found in the sample tested. Price, 44c for 3 lb.

LOCAL BAKERIES

A food chemist gives us the reason why products of the local bakery—Jewish and Italian and some other breads—taste so much better than white bread made in commercial baking plants, even though the same type and kind of flour is used for all. He writes:

"In your report on white bread [August 1936 Reports], what you say about taste is so true that I believe you do well to rate the different breads more on the basis of economy than on flavor. The commercial white breads differ very little in the kind and quality of the flour from which they are made, and what differences might develop from added yeast food, etc., are levelled off in the mechanical way in which the doughs are handled. A bread that is kneaded only once has a lot more flavor than when kneaded twice. Modern bakeries use machinery, and "punch," or knead, the doughs several times so that the resulting loaf has a close and even texture, thoroughly aerated and so baked as to retain the maximum of moisture, with the result that in appearance the bread is a thing of beauty but of flat and insipid flavor. One can grasp such a loaf in his hands and squeeze it to a small mass of dough. Hence the disfavor in which white bread manufactured by commercial bakeries has fallen

in the popular eye, though restaurants are its chief mainstay because it cuts nicely, has a pleasing look, and stays moist long.

"Contrast this with the white breads made by the local Italian and Jewish bakeries. They are crude in appearance, have a thicker crust and drier crumb by reason of longer time in the oven, and have a flavor so palatable that one eats out of sheer pleasure—not mechanically. Rolls and French and Vienna breads fall in the same category. They are all made of the same type of flour (except the large, Jewish, seeded rolls which are made from high glutens), yet they have the flavor that the other breads of commerce lack. Why? First, because they are not "punched" so often as the latter and hence retain some of the flavor of fermentation; and secondly, they are baked on their own bottoms and not in pans that support and distend the dough so as to achieve a spongy nothingness.

"My view of buying bread comes to this: First, I would prefer rolls, hearth or bottom breads, but if I had to have the pan breads I should prefer to buy from a local bakery with whose cleanliness I am acquainted, because such bread is more apt to have the homemade flavor than the breads of the large wholesale baking companies."

Not Acceptable

Aunt Jemima (Quaker Oats Co., Chicago). 9.7c per lb. dry flour. Flavor flat; texture loose and porous. Price, 11c for 1¼ lb.

Flour Workers

UNION ORGANIZATION IN THE FLOUR-milling industry made the headlines last September when striking members of the Flour, Feed, Cereal and Elevator Workers Union closed down the Pillsbury mill in Minneapolis, one of the largest in the nation.

Recognition of the union as a collective bargaining agency was a principal demand. The strike was settled on those terms, and membership in the union jumped from 200 to over 1,500.

During the past two years federal locals of the American Federation of Labor have won a score of contracts, chiefly with smaller mills. The 1935 convention of the A. F. of L. gave impetus to the campaign by directing the Executive Council to undertake a general organizing drive. The council's report a year later showed that 36

unions with a total membership of 3,400 were functioning. No international or national union has yet been established, however. Activities of the federal locals are coordinated through the National Council of Grain Processors and Allied Industries, of which Meyer L. Lewis is president.

Minimum pay under union contracts is usually not less than 55 cents an hour. In Minneapolis, following the strike last fall, the bottom rate was boosted to 65 cents from as little as 39 cents. Some agreements provide time and one-half for overtime work and double pay for Sundays and holidays. The average week is 40 hours.

Improvements in machinery and methods, plus the seasonal character of the work, have made unemployment a serious problem. Men in the union mills by no means get the \$1,352 a year that 65 cents an hour would yield at steady work. Supporting a family properly even on that amount would be difficult. With a smaller income, it is a good deal more than difficult. Yet within a radius of 100 miles from the large milling centers there are small mills paying wages 50 percent lower.

Aunt Jemima—Unionized employees of the Quaker Oats Company in Cedar Rapids, Iowa, and Pekin, Ill., expect to ask for a contract before the end of this month. Newspapers may report the results. CU members who prefer to buy union-made products would perform a helpful service by writing to this manufacturer.

CD—Union-made flour. It is produced at the Cooperative Grange League Federation Mills in Buffalo.

Co-op—Milled by F. W. Stock and Sons of Hillsdale, Mich., which is not unionized. The company informs us that Hillsdale, a small town of 6,000, has never had a labor union. The letter also states that the 125 employees were kept on full time and full pay during the depression.

Gold Medal—This brand is manufactured at a number of plants owned by General Mills. Union labor has been recognized at plants in Minneapolis; Great Falls, Mont.; Tacoma, Wash.; Portland, Ore.; and Vallejo, Calif. Other mills are non-union.

Heckers—A union agreement has been signed by the Standard Milling Company at its Minneapolis plant, and the union is attempting to win

FACT or FABLE?

(Answers to questions on page 5)

1. True. Neither powder nor paste will do nine-tenths of the things claimed for it, but powder is cheaper. See *October Reports*.
2. False. Warmth depends less on how much wool is present in a blanket than on how the blanket is napped. A lightweight, well napped blanket may be warmer than a heavy matted one. See *December Reports*.
3. False. This statement is a direct quote from Alka-Seltzer's advertising. The medical profession is forced to disagree. See *May Reports*.
4. The correct answer is *d*. The ethylene-gas treatment is apparently not harmful in itself, but it does allow the grower to make an unmarketable green orange look like a luscious ripe one, and to price it accordingly.
5. False. Very false, in fact. *Good Housekeeping's* approval has been bestowed on so many questionable (and plainly fraudulent) products that it has lost all caste as a reliable guide. As a case in point: no less than six dentifrices rated as *Not Acceptable* by CU's technicians bore *Good Housekeeping's* stamp of approval. See *October Reports*.
6. False. If you pay more than \$3.50 for a fountain pen you're paying for decoration, advertising costs, and excess profits. See *December Reports*.
7. True. Labor conditions in the radio industry generally are far

from good but there are several manufacturers of acceptable products who employ union labor. Among others, Philco and Ansley have union contracts; Bosch, Colonial, and RCA are well organized. See *November Reports*.

8. False. Kolynos, the most expensive toothpaste (on a dry-weight basis) that CU has tested, cannot make teeth any shades whiter in any days. No preparation can safely whiten teeth. See *October Reports*.
9. True. For the reasons—since there is no commercial product capable of curing either—you will have to ask Senator Copeland and his good friends, the patent-medicine manufacturers. See this issue.
10. True. Tomato juice will not provide as much vitamin C as a like quantity of orange juice, but it costs enough less to more than make up for the difference. See *December Reports*.
11. False. Although the tire industry realizes its technical potentialities better than many, an informed tire expert states that it would be possible to turn out tires at little greater cost which would almost double present tires in mileage. The desire for profits presumably stands in the way of the industry's doing so.
12. True. Except for veal, lack of fat may mean a tough and tasteless cut. See *August Reports*.

recognition at Superior, Wis. The Kansas City, Mo., plant is organized almost solidly, and employees are now asking for an agreement.

Lily White—The distributor, R. H. Macy & Co., states through its store economist that it does not know whether *Lily White* flour is made by union or non-union labor. Macy policy does not permit the store economist to reveal the source of supply; a check on labor conditions is therefore impossible.

Pillsbury—A large portion of the output is made by union labor. The

company deals with unions in its mills at Minneapolis and, according to one report, at Astoria, Ore.

Presto—A local union is strengthening its position in the Buffalo plant of the Hecker—H-O Company.

Sno-Sheen—A Pillsbury product.

Softasilk—A General Mills product.

Sunnyfield—The A & P, showing no reticence, has listed for CU 13 millers from whom it purchases. We have information regarding only one of them, Pillsbury in Minneapolis, some of whose mills are unionized.

ASPARAGUS and CHERRIES

A REPORT MADE FOR CONSUMERS Union by United States Government graders on 23 brands of Royal Anne cherries and 42 brands of asparagus reveals that labels still shed very little light on quality of the contents. Most of the packers continue to dodge the issue by giving no description of any kind; where descriptive labeling was used, it was generally inaccurate. Out of 10 brands of cherries and asparagus labeled "fancy" (meaning Grade A) only 4 merited the designation.

Housewives have long known that only a slender likeness exists between the contents of a tin can and the handsomely colored pictures on the label. Similarly, the descriptive adjectives commonly used are not much better as guides to quality than the comments of a Hollywood blurb writer on his producer's latest opus. "Super-quality" may sound like the ultimate in lusciousness, but the contents of the can seldom taste that way.

The packers and distributors, of course, know exactly what grade of goods they are selling. And the Great Atlantic and Pacific Tea Company some time ago set a precedent in the United States by frankly labeling certain lines of its canned goods as Grade A, B or C.

But practically all other large distributors withhold this useful information from the consumer. A few use "descriptive" grade labeling on some lines of their canned goods, with the following classifications: Fancy (Grade A)—90 to 100; Choice or Extra Standard (Grade B)—75 to 89; Standard (Grade C)—Below 75.

Uniform use of these adjectives would be of real value, although the system is by no means so clear as A-B-C labeling. Intermittent efforts on the part of the Government to set up the latter system have so far come to nothing, thanks largely to the lobbying of the canners.

To the *Country Club* brand of the

Kroger Grocery and Baking Co., goes this survey's highest award for informative, accurate labeling. Their cherries were labeled "Choice," and had an average score of 90. The label stated that the can contained "8 average servings." Actual count showed that this would mean 7 to 10 cherries per serving, which is average. Their asparagus was labeled "Fancy" and graded 90-93. Macy's labeled both their *Lily White* asparagus and *Lily White* cherries "Fancy." The asparagus graded 89 and the cherries 91. One can of *Libby's* cherries was labeled "Fancy"; it scored 87, while other cans of *Libby's* not so labeled actually were Grade A.

In general, this test showed that *Del Monte* and the large chain-store brands of cherries and asparagus offered good quality at low prices. *Richelieu* and S. S. Pierce's *Red Label* were of high quality but too expensive. *Libby's* and S. & W. were high priced and irregular in quality.

Samples were bought in 14 cities throughout the country for these tests. The ratings for asparagus are presented separately for different sections of the United States, because of varia-

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tions in price and quality for identical brands. It was impractical to make geographic comparisons in price and quality for different varieties of asparagus (such as the cheaper soup cuts and the expensive tips) of the same brand.

Only one listing is made for cherries, since fewer brands were tested and these showed only minor variation according to the point of purchase.

If none of the brands rated best in the following listings are available in your community, you may provide yourself with a rough estimate of the quality of brands that are available by applying a few simple standards.

Cherries should be firm fleshed, with smoothly colored, unbroken skins. It is desirable that they be uniform in size, although this is not essential. The liquid in which they are packed should be just enough to cover the fruit, since you are paying essentially for cherries rather than syrup.

Asparagus should have stalks that are well formed and firm, but not stringy. They should be capable of holding their shape without breaking when they are removed from the can. The liquid in which they are packed should be clear.

Government standards for flavor require that it approximate the flavor of the freshly prepared uncanned product as closely as possible. But the canned asparagus does not exist that tastes like fresh asparagus. It does not do to call all canned asparagus "poor" because of this. There are many people who like, or even prefer, the canned taste.



CHERRIES ON THE LABEL.

CHERRIES IN THE DISH.

Maybe the artist was thinking of peaches.

AV. SCORE	BRAND & PACKER (OR DISTRIBUTOR)	AV. PRICE	APPROX. PRICE # 2 CAN
		PER LB. OF CANS TESTED	

ASPARAGUS**EAST**

<i>Good Quality</i>		¢	¢
91	Krasdale (A. Krasne)	19	21
93	Fi-na-st (First National)	21	26
92	Grand Union (Grand Union)	22	27
93	Del Monte (Cal. Pack. Corp.)	23	23
92	White Rose (Seeman Bros.)	23	29
91	Monarch (Reid, Murdoch)	23	29
91	Country Club (Kroger)	24	28
90	Royal Scarlet (R. C. Williams)	24	29
90	S & W (Sussman, Wormser)	24	29
91	Red Label (S. S. Pierce Co.)	24	29
91	Libby's (Libby, McNeill & Libby)	25	35
90	Sunbeam (Austin, Nichols)	26	
94	IGA (Independent Grocers)	29	36
93	Richelieu (Sprague, Warner)	32	38
92 ¹	Ecco (Economy grocery stores)	23	27
89 ¹	Lily White (R. H. Macy)	24	29
92 ¹	Premier (Francis H. Leggett)	26	32

SOUTH

<i>Good Quality</i>		¢	¢
92	Ladoga (Ladoga Canning Co.)	22	28
91	Del Monte (Cal. Pack. Corp.)	25	23
91	Hermitage (Robert Orr & Co.)	25	30
90	Monarch (Reid, Murdoch)	28	35

<i>Fair Quality</i>		¢	¢
89 ¹	Hills-Dale (Emery Food Co.)	23	29
87	Sacramento (Bercut Richards)	26	

<i>Poor Quality</i>		¢	¢
84	Bonny Lass (Michigan Cannery)	20	
77	Argo (Cal. Pack. Corp.)	23	
84	Premier (Francis H. Leggett)	30	
89 ²	Libby's (Libby, McNeill & Libby)	31	39

CENTRAL STATES

<i>Good Quality</i>		¢	¢
91	Argo (Cal. Pack. Corp.)	21	
90	Sacramento (Bercut Richards)	21	
92	Marco (H. A. Marr Grocery Co.)	23	27
91	Hills-Dale (Emery Food Co.)	24	30
93	Premier (Francis H. Leggett)	24	30
91	IGA (Independent Grocers)	25	25
93	P & G (Paxton, Gallagher)	27	32
92	Solitaire (Morey Mercantile)	28	25
92 ¹	Red & White (Red & White)	26	25
91 ¹	Monarch (Reid, Murdoch)	28	29
91 ¹	Libby's (Libby, McNeill & Libby)	30	29
92 ¹	Richelieu (Sprague, Warner)	34	39

<i>Fair Quality</i>		¢	¢
88	Del Monte (Cal. Pack. Corp.)	21	24

<i>Poor Quality</i>		¢	¢
82	Brimfull (H. A. Marr Grocery Co.)	17	21

¹ Variable² One of the cans tested was substandard

86 ²	Clover Farm (Clover Farm)	22	26
84 ²	Briardale (Briardale Stores)	31	39

WEST

<i>Good Quality</i>		¢	¢
90	Monarch (Reid, Murdoch)	15	19
92	Red & White (Red & White)	21	25
90	Mission (Cal. Pack. Corp.)	23	

<i>Fair Quality</i>		¢	¢
87	Trupak (Haas Bros.)	22	25
85	Amocat (West Coast Grocery Co.)	24	29
85	IGA (Independent Grocers)	24	
86	Rock Dell (Younglove Grocery)	30	37

<i>Poor Quality</i>		¢	¢
82	Bayside (Bayside Canning Co.)	13	16
81	R C (Richmond-Chase)	13	16
79	Cal-best (Salinas Valley)	13	16
82	Snow Peak (Bayside Canning Co.)	14	17
76	T & M (Tiedeman & McMorran)	15	19
77	Hills-Dale (Emery Food Co.)	17	21
86 ¹	Del Monte (Cal. Pack. Corp.)	19	22
82	Valley Belt (Parrott & Co.)	20	
82	Libby's (Libby, McNeill & Libby)	21	25
79	Five Bros. (Miller Wholesale Co.)	21	
81	Century (Sussman, Wormser)	23	
88 ¹	S & W (Sussman, Wormser)	28	29

ROYAL ANNE CHERRIES^a

<i>Good Quality</i>		¢	¢
90	White Rose (Seeman Bros.)	15	28
91	Lily White (R. H. Macy)	15	29
91	Brimfull (H. A. Marr Co.)	16	30
90	Country Club (Kroger)	16	30
90	Del Monte (Cal. Pack. Corp.)	16	28
90	Premier (Francis H. Leggett)	18	30
91	Monarch (Reid, Murdoch)	18	32
93	Red Label (S. S. Pierce Co.)	20	37
91	Royal Scarlet (R. C. Williams)	20	39
92	Briardale (Grocers Wholesale)	21	39
91	Hermitage (Robert Orr & Co.)	22	38
92	Richelieu (Sprague, Warner)	24	40

<i>Fair Quality</i>		¢	¢
88	Rock Dell (Younglove Grocery)	17	30
87	F & P (Filice & Perrelli)	17	32
85	Libby's (Libby, McNeill & Libby)	17	29
88	IGA (Independent Grocers)	18	31
88	S & W (Sussman, Wormser)	18	33
88	Red & White (Red & White)	18	30
85	Solitaire (Morey Mercantile)	20	33
86	Clover Farm (Clover Farm)	21	32

<i>Poor Quality</i>		¢	¢
82	Rose-Dale (Libby, McNeill & Libby)	16	28
77	Raycrest (Ray-Maling Co.)	18	34
73	Sacramento (Bercut Richards)	18	

Where prices are not given, only very small cans were tested, and no approximation was made of the price of a #2 or a #2½ can. In such cases the figure for price per pound will be relatively high.

^a Approximate price given for cherries is for #2½ can.

AUTOMOBILES

Chevrolet	Page 23,24	<i>A technical survey of the industry and full descriptive ratings on the following cars delivering (in N.Y.C.) up to \$1000:</i>	Oldsmobile	Page 25
Chrysler	26		Plymouth	21,23
DeSoto	24		Pontiac	25,26
Dodge	26		Studebaker	25
Ford	21,22,24	Hudson	Terraplane	22,26
Graham	24,27	Nash-Lafayette	Willys	21

CONSUMERS UNION PRESENTS HEREWITH the first section of a report, with ratings, on the automobiles of 1937. In this issue are covered those cars which sell for about \$1,000 and less for the 4 door sedan. Higher-priced cars will be dealt with in the next issue of the *Reports*.

Featuring this year's market is a new class of low-powered, "economy" cars. Only two are available in this class as yet—the *Willys* and the 60 H. P. *Ford*. They cost less to buy than other cars of standard seating capacity, and considerably less to operate. Classifiable with them in operating cost, though not in first cost, is the Business model *Plymouth* when fitted with economy equipment heretofore not available to individual buyers. These cars will do nearly all that is normally required of any car of higher power, and people for whom an automobile is a severe drain on the budget simply should not consider any other new car. Safety glass is standard on these cars, as on all other new cars sold, in those states that require it (all prices quoted in this report include safety glass).

Features

The models rated vary in horsepower from 48 (*Willys*) to 101 (*Hudson 6*). They are in general as roomy as cars which sell up to \$1500 delivered—often carrying bodies which are the same except for trimming—but they sell between \$593 (*Willys*) and \$977 (*Hudson 6*) delivered in New York City. The slowest of them will do around 65 miles per hour, the fastest close to 90, and the least powerful will carry a full load of passengers through moderately hilly country in

high gear. When loaded, most of them are wider than they are high (few have adequate headroom), and they vary between 175 and 199 inches in overall length without any corresponding variation in legroom inside. A year from now, as used cars, they may be expected to bring in cash from 30 to 40% less than their cost price.

There are more similarities between these cars than there are differences. Only one of them (*Graham Crusader*) has a body which uses wood for strength or a roof which is not of steel. Only two (*Willys* and *Ford*) do not have hydraulic brakes. One size of tire fits 14 cars on the list. All will run without knocking—until carbon accumulates in their cylinders—on "regular" grade gasolines. All have huge fenders beautiful to look at and very expensive to replace. Radiator grilles, often of die-cast metal which breaks but never bends under impact, are also expensive to replace, and now coming into the accessory market are special bumpers to protect the grilles which originally protected the radiators. The fenders cannot be seen while driving, and the grilles often cut off so much air from the radiators that the size and cost of the latter has had to be increased. These things are so because cars are made for high-pressure sales and the fact should not be forgotten.

The new cars have wider seats by one or two inches than their predecessors and the seats are often at a more comfortable height from the floors. In the rear at least, floors are more often flat or nearly so, but in many cases a very high price has been paid for flattening them in terms of mechanical complications which lie beneath.

Some 1937 cars are easier to control, though bad driver-vision and speedometers which are artistic but hard to read make it even harder to realize when control is needed. Increasing smoothness and quiet (gain in interior quiet is very noticeable), better roadability at high speeds, and more rapid acceleration accentuate this difficulty. On a few cars—chiefly those made by Chrysler—less turning of the steering wheel is required in maneuvering. On the majority the tendency is the other way, which makes parking easier and maneuvers at medium speeds dangerously difficult. There has been no further adoption of the "Electric Hand" despite its improvement. Gear shifting stands exactly where it stood in 1929, except for recent improvements (now available on most cars) in the gear-synchronizing mechanism which was introduced in that year.

Safety

In respect to roadability alone, most cars are safer. They sway less on turns. Their centers of gravity are closer to the ground, which makes them harder to tip over. Many makes have adopted "airplane-type" direct-action shock-absorbers which give better control on rough roads without spoiling the riding qualities; the difference on Chrysler lines is pronounced. On many of the makes sway is prevented by torsion "anti-sway" bars, which stiffen the motion of the springs, sometimes unpleasantly. Compared to these changes, those made for "safety" by the body designers are small but important. They have curved the ends of the door handles inward to avoid snagging objects outside the car. On Chrys-

ler-built cars all projections on the dash have been removed and sharp edges generally rounded and cushioned to prevent injuries.

Vision upward, toward traffic lights and the sky, has been improved slightly. Lengthening of hoods has offset improvements in vision downward toward the road and the right curb. Vision to the rear is poorer, chiefly because rear windows are in most cases divided in order to strengthen the back body panel. No passenger car has anything like adequate vision for its driver (which could be secured by reasonable changes). The thickness of front corner posts (sometimes amounting to 7 inches at eye level for tall persons) is inexcusable. These blind areas can—and do—easily hide pedestrians and other cars well within the danger zone.

Balance

Related to the question of safety is that of car balance. For good roadability and handling, and for good rear-wheel traction, the heavy masses of the car—chiefly the engine—should be located so as to keep plenty of weight on the rear wheels. But riding qualities are aided and passenger space increased by moving engine and seats forward, which has the opposite effect. Nearly all makers have taken the latter step, and some cars handle badly as a result. We have commented on this in the ratings under the terms “nose-heavy” and “car-balance.”

Both safety and lower maintenance costs are promoted in cars having front axles by positioning them with radius rods, as on *Ford* and *Hudson-Terraplane* models. But some cars have their front axles positioned only by the springs; and when (as with *Plymouth*, *Dodge*, and *Nash-Lafayette*) a “kick shackle” is used to lessen the transmission of road shocks to the steering wheel, the resulting attachment is not favorable to maintenance of alignment or to maximum safety. When the “kick shackle” is not used (*Chevrolet Master*, *Willys*, one *Studebaker* model, and *Graham*), alignment and safety are increased, but riding and steering may be unsatisfactory unless the springs are relatively stiff.

With independent front-wheel suspension, maintenance and accident-repair costs are higher than with conventional springing. On further investigation we rate the *Studebaker Planar*

suspension, involving a transverse leaf spring, as perhaps the best type. The exposed coil-spring types are almost equally good; the *Dubonnet* type, used on *Chevrolet* and discarded this year by *Pontiac*, is less well regarded.

Due in part to the increasing use of rubber in body-frame mountings, to the use of too little material, or of material in the wrong place, the body-chassis units are not sufficiently rigid on all makes. Too great flexibility affects the accuracy of steering at times or makes a car treacherous to handle on rough roads, but more common consequences are unending body noises, door rattles, general loosening, and occasionally an epidemic of broken body bolts.

It may be said in general that the mechanical parts of the automobile

have been improved from year to year, but far slower than would be the case if a large part of the car's cost were not diverted into features which make it easier to sell, but which do not add to the durability of the vehicle as such. The adoption this year of hypoid gears so that flat floors may be given motoring America is a case in point.

Hypoid Gears

The hypoid form of rear-axle gears permits the lowering of the floor because the driveshaft enters the rear axle at a lower point. It also contributes to an increase in strength for a given weight, and is more easily made quiet. But in agitation over the problem of lubricating hypoid gears, the industry betrays confusion if not a guilty conscience at their introduction this

Glossary of Terms Used

Engine volume: The technical term is total piston displacement: The volume of space swept through by the pistons as they move from one end of their stroke to the other. When this space is large, more gasoline-and-air mixture is required to fill it, and more power (usually) is developed.

Gas consumption factor: The number of cubic inches swept through by the pistons while the car moves one foot. For cars of the same weight and efficiency, a low figure means good economy, a high figure means good performance with sacrifice of economy.

Performance: The ability with which the engine makes the car accelerate, climb hills, and attain high speeds.

Compression ratio: The extent to which the gas inside the cylinder is compressed before firing. A ratio of 6 to 1 means that the gas is compressed to one-sixth of its original volume before firing.

Gear ratio: As used here, the number of turns made by the engine for each turn of the rear wheels. When the ratio is reduced, the engine makes fewer turns for each turn of the wheels.

Steering ratio: A term used to express the number of complete turns of the steering wheel which would be required to swing the front wheels through one complete turn.

Overdrive: Semi-automatic special gearing which goes into operation at 35-45 miles per hour and reduces the engine speed, making for better gasoline and oil economy and less wear.

Radius rods: Rigid arms connecting axle and car frame so that the axle can move up and down but not backwards and forwards.

Kick shackle: A link connecting left front spring and frame which absorbs some movements of the axle before they can be transmitted to the steering wheel.

Wander: Tendency of the car to drift in a direction in which it is not being steered, particularly on crowned roads or in cross winds.

Brake loading: The number of pounds of car each square inch of brake lining is required to stop; based on shipping weight plus 300 pounds, approximately the weight of a fully equipped car with driver. The brake loading is a rough measure of how long brake lining will last; a low figure is favorable to long wear.

LOS ANGELES - YOSEMITE ECONOMY RUN

Sponsored by the Gilmore Oil Co. Supervised by American Automobile Association. Jan. 7, 1937. 352 miles.

MAKE, IN ORDER OF FACTORY DELIVERED PRICE	LOADED WEIGHT	TON MILES PER GAL.	MILES PER GAL.
Willys	3485 lbs.	49.2	28.16
Willys	3404	46.4	27.29
Chevrolet Master 6	4300	41.8	19.45
Plymouth De Luxe 6	3982	41.5	20.83
Terraplane De Luxe 6	4400	48.4	22.00
Nash-Lafayette 400	4380	44.8	20.47
Pontiac 6	4400	47.5	21.60
DeSoto	4502	45.5	20.23
Oldsmobile 6	4340	40.2	18.53
Graham Cavalier	4245	52.246	24.62
Pontiac 8	4500	41.3	18.33
Chrysler Royal 6	4480	49.59	22.14
Nash Ambassador 6	4380	47.3	21.60
Graham 116 Supercharger	4460	53.40	23.95
Oldsmobile 8	4780	41.0	17.17
Hudson 8	4600	52.232	22.71
Packard 6	4480	44.5	19.89
Nash Ambassador 8	4880	49.65	20.35
Chrysler Imperial 8	4900	47.6	19.45
Packard 8	4836	43.6	18.05
Lincoln Zephyr 12	4620	41.7	18.05
Chrysler Airflow 8	5580	43.6	15.64
Cord 8	5000	45.6	18.24

The loaded weight includes 5 passengers, tools and set of chains, and 100 lbs. of baggage. No oil was added by any of the entries. Average speeds were between 30 and 35 miles per hour. All cars were stock sedans. Weather conditions were adverse, including freezing weather and sleet. As in the past, no Ford cars were entered.

Courtesy American Automobile Association.

year. There is overwhelming indication that hypoids will work out badly, with the lubricants available, in the hands of "average" consumers. *No hypoid-equipped car rated as a "Best Buy" should be so considered unless the purchaser can obtain from the dealer a written guarantee against cost from rear-axle trouble over a stated period, say 40,000 miles, contingent upon the owner's having the lubricant replaced where, when, and with what the dealer specifies.* It is imperative, guarantee or no guarantee, that buyers of hypoid-equipped cars follow precisely the instruction book which comes with the car. The responsibility for trouble can then be placed with the manufacturer. We give a brief outline of the problem.

There are three types of rear-axle lubricant: straight mineral oils, ex-

treme-pressure (E-P) lubricants, and extreme pressure hypoid lubricants. Straight mineral oils are recommended (*Motor*, January, 1937) only for 1937 Pontiac, Chrysler Airflow, and Willys cars. E-P lubricants are recommended for use in the Ford, Graham, Hudson, Nash, Nash-Lafayette, and Terraplane. On these cars the lubricant should be changed, not merely added to, every 5000 miles. E-P lubricants may also be used in transmissions. E-P hypoid lubricants should be used in the following makes of cars rated in this issue: Chevrolet, DeSoto, Dodge, Chrysler Royal, Oldsmobile, Plymouth, and Studebaker. Do not use this oil in transmissions, and do not mix one brand with another. Change it completely every 5000 miles, and oftener in the summer. Use the brand recom-

CONSUMERS UNION Reports

mended by the manufacturer and no other—then hold the manufacturer responsible for troubles when they arise.

Durability of any car may be reduced 50% by ill-treatment. And the simplest form of this is attempting to save money by not doing anything to the car so long as it continues to run. Bus-line and fleet operators save money by doing precisely the opposite; they lubricate, inspect, adjust, and repair on schedule, basing the schedule on what the manufacturer advises and what they themselves learn. Abuse of the vehicle by bad driving is equally effective in shortening its life. In respect to durability as well as safety, fast driving is bad driving.

Cars which have automatic chokes are identified in the ratings. The device is a frequent source of trouble, but it simplifies cold starting, allows the car to be warmed up without an attendant and prevents sometimes dangerous stalling while driving before the car is warmed up. Economy in cold weather is probably better on the whole with the device than without it.

Mileage Tests

Nine of the most popular 1937 cars were given an 87-mile road test for gasoline mileage during December and January; results for each car are noted in the individual ratings below. The cars were obtained from dealers who understood the purpose of the test and had opportunity to check the condition of the cars before the runs were made. The route included part of the hilly Mohawk Trail. Traffic was light; a driving speed of 40 miles per hour gave an average speed of 37. This sort of driving is similar to light touring conditions in New England, and a deduction of 20% from the mileages obtained will leave an approximate figure for average suburban use.

We reprint also the results of the Gilmore Oil Co.'s Los Angeles-Yosemite Economy Run of January 7, 1937. Results of both of these runs agree fairly well with the theoretical "gas consumption factor" printed in our table of statistics. Carburetors of the same make and model vary 6% in the mixture ratio they afford, and similar engines 10% in the mileage per gallon they will deliver. Drivers vary even more.

Maximum "performance" and gasoline economy are forever opposed to

each other. The more performance a motorist demands, or accepts, in his car, the more he will pay for gasoline. Performance depends upon horsepower available, gear ratio, and weight. And while reducing weight is beneficial to both performance and fuel consumption, reducing either the power or the gear ratio will increase miles per gallon and cut down performance. Variations from normal in the way manufacturers have dealt with these factors in their 1937 products are indicated in the ratings below; there has been no general trend. Several makers have improved carburetion and then offset most of the gain by increasing engine volume. Reduction of gas and oil consumption, as well as wear and noise, at high speeds by providing overdrive has the same number of adherents (among the cars here reported on, *Nash-Lafayette, Graham, Chrysler, DeSoto, and Studebaker*) that it had last year, although a gain in their number had been expected. For motorists who do a major part of their driving at 40 miles an hour or higher, overdrives are worth the extra charge made for them. The Columbia two-speed axle is still available for the 85 H. P. *Ford*, but offers less advantage in the 1937 model.

With *Ford's* adoption of alloy steel pistons in all engines, *Ford* oil consumption should parallel that of other cars. It will remain true of all makes that they will use more oil as they grow older, according to their treatment when cold, the speed at which they are driven, the condition and quality of oil used, and general operating factors, rather than according to differences in construction. The best simple rule for good oil mileage, as for good durability, is to keep the speed down.

Most cars above the lowest in price are equipped with automatic regulation of the rate at which the battery is charged, and with generators capable of high charging rates. The regulators help not only by causing the generator to carry more of the electric load when lights, heaters, etc., are in use, and by keeping the battery fully charged, but by preventing overcharging during the day, particularly at high speeds. Cars having this feature are so designated in the ratings. One of the most useful accessories, for cars which do not have voltage regulation, is a hand-operated

Higher-Priced Cars

The automobile report in this issue will be supplemented in the next issue by a report on automobiles which deliver in the \$1000—\$1500 price range, including *Buick, Studebaker, Hudson 8, Lincoln Zephyr, Nash, Packard, La Salle, and Oldsmobile 8*. The two reports together will cover 99% of the domestic automobile production.

rheostat controlling the charging rate, which most electric-equipment mechanics can install and explain for approximately \$2.

Accessories

The dealer's profit on the accessories he sells is large and sure. For this reason, the sale of accessories, many of which should be on the car in the first place, is being pushed. One indication of the changes that have taken

place in the *Willys* organization is an accessory list with items which add up to \$51.25, not including radio, heater, or one of the popular heater-defroster installations which appear to have real value. Similar lists accompany other cars. "De luxe" or "custom" models should be looked at critically and an itemized list of their added equipment asked for. Such equipment usually includes three classes of items: ornamentation (chromium strips, etc.); conveniences (1000-mile trip speedometers, dash compartment locks, arm rests); and real use-values (better upholstery, extra windshield wipers and tail lights). It is often possible to obtain the useful items of de luxe equipment singly without paying for the others. Getting upholstery of better grade, however, usually requires buying "the works."

Each car in the third group of ratings given (\$850 to \$1000), as well as some cars in the second group (\$698 to \$829), carries a body with the dimensions comparable to those of higher



Courtesy National Petroleum News.

SCORING OF HYPOID GEARS WITH WRONG LUBRICANTS

Upper left: effect of lubrication with straight mineral oil. Upper right and lower left: with mild E-P lubricant. Lower right: with E-P hypoid lubricant. The gear lubricated with the E-P hypoid ran 10 times as long as the gear lubricated with straight mineral oil.

priced cars. Further expenditure brings in most instances not more room but greater horsepower (usually from 8 cylinders instead of 6), better riding qualities, better upholstery, more ornament, and greater expense for operation and repairs, despite occasionally longer life.

Trade-in allowances vary considerably from dealer to dealer, so that every new car purchaser finds himself inclining toward trading his old car at the highest figure. While there is some justification for this practice, if the cars to which it is applied are rated well up on our list, it may also change the order of rating. For example, \$45 over-allowance by an incautious *Chrys-*

ler Royal dealer places this car on a level with the *DeSoto* in our ratings. We suggest, tentatively, that a rating be allowed to remain unchanged unless differences in allowance exceed \$45. The buyer should never fail, however, to keep his mind on the vehicle he is getting—on its values, actual and intangible. He should never deal on the price of his old car alone, and he should consider also the service facilities which the dealer provides. No rating holds if there is a lack, in the region where a car is to be used, of service men who understand the car and have the tools and parts with which to service it.

In the ratings, the delivered price

for New York City is given (exclusive of the city sales tax), since it is impossible to include delivered prices for all parts of the United States.

Prices not in brackets, and all ratings, refer to the lowest-priced 4-door sedan of the make under discussion. The bracketed figure in each listing is for the lowest-priced 2-door sedan. Except for two cars (*Chevrolet Master* and *Plymouth Business*), the front seat in the 2-door model is undivided, giving all the seating capacity and comfort of the 4-door model, plus certain advantages—such as the safer transportation of children, better rearward vision, etc.—to offset any difficulty in reaching the rear seat.

1937 AUTOMOBILES: A STATISTICAL PICTURE

The columns below have the following significance:

1. **Overall length:** A measure of parking difficulty, no measure of legroom inside. There is little correspondence between overall length, wheelbase, and legroom.
2. **Shipping weight:** Add 150 lbs., on the average, for curb weight with car empty. Heavy cars cost more to run, may or may not be stronger.
3. **Taxable horsepower:** Licensing information in some states. Calculated from engine dimensions.

4. **Advertised horsepower:** Can be obtained only at the high road speeds listed. Horsepower available at moderate speeds is much less.
 5. **Compression ratio:** High ratios are more efficient; all will knock on ordinary gas when carbon accumulates.
 6. **Gas consumption factor:** See Glossary.
 7. **Brake loading:** See Glossary.
- Figures preceded by initials OD apply when overdrive is in use.

	OVERALL LENGTH INCHES	SHIPPING WEIGHT POUNDS	TAXABLE H. P.	ADV. H. P. AND SPEED (M.P.H.) AT WHICH REACHED	COM- PRESSION RATIO TO 1	GAS CON- SUMPTION FACTOR	BRAKE LOAD- ING, POUNDS PER SQ. IN.
Chevrolet Master	187	2845	29.50	85 @ 60	6.25	57.1	20.
Chevrolet De Luxe	187	2935	29.50	85 @ 61	6.25	64.6	20.4
Chrysler 6 or De Soto	199	3045	27.34	93 @ 70.5 OD. 93 @ 93	6.5	66.2 OD. 50.25	22.6
Dodge	196	2912	25.35	87 @ 70.5	6.5	63.5	21.7
Ford 60 H. P.	180	2543	21.63	60 @ 73.	6.60	44.3	15.3
Ford 85 H. P.	180	2780	30.	85 @ 80.5	6.12	59.2	16.5
Graham Crusader	185.5	2695	21.60	70 @ 61.75	6.8	54.5	23.8
Graham Cavalier	198	2960	25.35	85 @ 59.5 OD. 85 @ 79.5	6.7	62.75 OD. 47.0	25.8
Hudson 6	198	2990	21.60	101 @ 78	6.25	61.5	21.3
Nash-Lafayette	197	3240	27.34	90 @ 66.5 OD. 90 @ 94.5	5.61	68.2 OD. 48.0	20.
Oldsmobile 6	193	3310	28.40	95 @ 65	6.10	68.5	24.4
Plymouth Business	193	2770	23.44	82 @ 71.5	6.7	57.8	20.6
Plymouth De Luxe	193	2840	23.44	82 @ 70.5	6.7	58.4	21.2
Pontiac 6	193	3250	28.3	85 @ 66	6.2	69.	22.
Pontiac 8	198	3350	33.8	99 @ 72.5	6.2	74.	22.7
Studebaker Dictator	193	3205	25.4	90 @ 60 OD. 90 @ 85.5	6.0	70. OD. 49.2	25.4
Terraplane	193	2865	21.6	96 @ 76	6.25	61.5	20.5
Super Terraplane	193	2905	21.6	101 @ 78	6.25	61.5	20.7
Willys	175	2250	15.63	48 @ 57.5	5.7	42.5	19.0

Economy Group (\$593-\$665)

Best Buy

Ford V-8 60 H. P. Model 74 (Ford Motor Co.). Del'd Dearborn, Mich., \$604 [\$544] (plus Federal tax) Del'd NYC \$665 [\$604]. Trunk model \$25 extra.

Except for smaller tires, higher gear ratio and a smaller powerplant, the 60 H. P. *Ford* is substantially the same car as the 85 H. P. *Standard* described below. As indicated by the brake loading factor, brakes are definitely oversize. Steering is unnecessarily easy and requires more turning than it should. These are two results of a difference in weight, between 60 and 85 H. P. engines, of about 160 pounds. More important, being less "nose-heavy," the 60 H. P. has far better roadability.

There is more noise from the 60 H. P. engine, but it is less annoying than the noise in the 1936 *Ford*. Riding qualities are equal to the 85 H. P. in front, slightly inferior in rear.

While the 60 H. P. engine is by no means new, having been built abroad for two years, a few "bugs" may develop in the early models. Subject to the elimination of these its durability should prove adequate. The rest of the car will last longer, if anything, than the more powerful model. Accessibility is superior to the 85 H. P. The 60 H. P. has neither automatic choke nor voltage regulation.

Performance of the *Ford 60* is such that it will maintain normal driving schedules except in very hilly country

or under very heavy loads. In CU's test it gave 25.6 miles per gallon of gasoline. The car tested, however, was obviously running too lean for best results.

The 60 H. P. powerplant may be obtained with the 85 H. P. clutch for a few dollars extra, and we suggest this investment for those whose driving habits require frequent use of the clutch.

The *Ford 60 H. P.* is in our judgment a somewhat better buy than the *Willys* because it has excellent roadability, modern engine design, and is better suited to open road driving. It has a roomier body and better provision for luggage.

Also Acceptable

Willys 4 Model 37 (Willys-Overland Co.). Del'd Toledo, Ohio, \$538 (plus Federal tax). Del'd NYC \$593. No 2-door sedan or trunk model available.

The 1937 *Willys* has been increased to normal width. It has no rear quarter window. The front seat, which is "adjustable" by picking it up and setting it in a different place, is 48 inches wide (average); the rear seat is narrow—45.5 inches—with room at elbow height of 50.5. Seats are far too close to the floor (11 and 12.5 inches) and headroom over the rear seat is scant (35 inches). All doors hinge at the front. Ample luggage space housing the spare tire is provided.

Vision from the driver's seat of the *Willys* is relatively good, though no better in the direction of the curb than

on much larger cars. Brakes are good, balance of the car and stability on turns excellent. Riding qualities are fair to good in front, fair in rear.

Though the chassis is new, it seems sound in design and ample in strength—a rigid frame, good shock absorbers, good steering, good balance. The engine, fitted with neither automatic choke nor voltage control, is not new in design, and its durability, when operated at moderate speeds, has been demonstrated to be satisfactory. The whole car is simple and easy to work on, and maintenance should be slight.

In CU's test, under adverse conditions and with a very rich factory setting (the *Willys* carburetor is fully adjustable), the car averaged 24.97 miles per gallon. The noise level at 40 miles per hour is higher than the *Ford 60 H. P.*, with which the *Willys* directly

compares, but is not irritating. Smoothness is satisfactory except at very low and very high speeds. This car will be less expensive to maintain, if conservatively driven, than the *Ford 60*. It may, however, be less satisfactory to the person using an economy car for the first time and used to driving the over-powered cars of other makes.

Willys De Luxe Sedan Model 37 (Willys-Overland Co.). Del'd Toledo, Ohio, \$589 (plus Federal tax). Del'd NYC \$640. No trunk model available.

Differences in trim and the use of color distinguish this car from the *Standard* sedan. We feel that a de luxe model of a car designed for economy should receive no particular endorsement on our part.

Low-Priced Group (\$698-\$829)

Best Buys

Plymouth Business Model P-3 (Chrysler Corp.). Del'd Detroit, Mich., \$665 [\$620]. Del'd NYC \$698 [\$653]. No trunk model.

The same dies are apparently used

for all Chrysler-built bodies save the *Airflow*, which means that seat dimensions in all lines are virtually the same: maximum width, front cushion, 47 inches; rear cushion, 48.5 inches, wider than average. Seats are compar-

atively high off the floor, headroom is likewise better than average, and floors, due to hypoid gears, are flat.

The 2-door *Business* sedan has individual bucket-type front seats. Luggage space, housing the spare tire,

holds about as much as last year's De Luxe trunk models. Riding qualities with the springs fitted, aided by "airplane"-type shock absorbers, are fair to good in front and fair in rear, but are inferior to the De Luxe. Roadability is as good or better on the Business line. Vision is better to the extent of being unimpeded by ventilating window frames. The Business line is not fitted with automatic choke or voltage control.

Ease of handling is fairly good. The car steers fast yet with ease, due to a mechanism redesigned to suppress wandering. Brake action is steady, bearing a direct relation to pedal pressure. The use of both soft springs and a "kick shackle" makes the front-end assembly unstable at high speeds, especially on rough roads, on curves or under heavy braking.

Body hardware projections have been rounded off, the rear edge of the front seat padded, instrument-panel fittings made flush with the panel, etc., to reduce crash injuries.

Durability should be about the same for both cars. Both use hypoid axles, in regard to which any statement of durability would be rash. The Business model has a slight advantage over the De Luxe in operating economy.

Both the Business and De Luxe Plymouth may be ordered with special economy equipment, giving about three miles more per gallon. This equipment consists of a smaller carburetor and manifold restricting the horsepower of the engine to 65, and a reduced rear-axle ratio. Performance and maximum speed are both reduced, but remain adequate. Thus outfitted, the Business

Plymouth stands in operating costs between the economy group and the other low-priced cars. We recommend the equipment, which will result in low operating costs and long engine life.

The 1936 Business Plymouth suffered less depreciation than any other car in this group. Maintenance costs are low.

Ford V-8 85 H. P. Standard Model 78 (Ford Motor Co.). Del'd Dearborn, Mich., \$645.50 [\$585.50] (plus Federal tax). Del'd NYC \$708 [\$647]. Trunk model \$25 extra.

New bodies, a revised braking system, and quieter operation are the major changes in the 85 H. P. Ford. All models have enclosed spare tires and luggage space of good size. Headlamps are set into the fenders. Vision is still better than average, especially to rear, and corner posts thinner than average, but thicker than last year. But the new bodies have slightly less room inside than the old ones. Entrance is easy, seats fairly high. Hypoid gears are not used, and the tunnel in the rear floor is retained.

Brakes are now operated by cables, running in flexible conduits from frame to wheel, making operation less erratic. Brake shoes are applied by linkage giving an extreme degree of wrap or "servo" action. This results in greater braking action for the same pressure, especially when brakes are applied suddenly. We consider this, in the degree employed, an objectionable feature. The brakes are, however, powerful, and the car, due to its front radius rods, behaves well when they

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are applied. At present, complete adjustment of the new brakes is not attempted at Ford service stations; brake mechanisms are brought under the Ford Unit Exchange Plan and replaced by factory-adjusted units.

The new Ford 85 is quieter than its predecessor, partly because the engine speed has been reduced, partly because of careful changes in design. Reduction in gear ratio has increased economy and lengthened engine life. An optional gear ratio (3.54 to 1) may be ordered, reducing engine speed and gas consumption still further. All Ford engines are now fitted with alloy steel pistons. The cooling system has been greatly improved. 85 H. P. models may be fitted with the clutch used in the Ford truck; and those who have ever burned out clutches in their cars, or who contemplate severe service, should make the small extra investment. Automatic choke and voltage regulation are not offered.

The car tested by CU had the standard ratio, 3.78 to 1, and averaged 19.07 miles per gallon at an average speed of 37.2 miles per hour with a load of 475 pounds.

The Ford 85 steers easily, but with much turning, the steering ratio having been increased this year. The car driven had considerable reaction at the steering wheel on rough roads. Riding qualities, which should be good, suffer from the poor shock-absorber control, and car balance is not too favorable for high-speed driving.

With the available 3.54 to 1 rear-axle ratio, the Ford 85 is capable of economical and long-lived open country operation, with a margin in roadability over other cars at the price.

Also Acceptable

(In estimated order of merit)

Terraplane De Luxe 6 Model 71 (Hudson Motor Car Co.). Del'd Detroit, Mich., \$790 [\$735]. Del'd NYC \$829 [\$777]. Trunk model \$20 extra.

This car is really the standard model, not "de luxe." (The *Super Terraplane* should be classed as a "de luxe" model.) It is given this rating because of its roominess, its front-axle construction and other safety features, and the fact that the car has been continuously improved during recent years

without drastic change, thus reducing unexpected and uneliminated problems of design and construction to a minimum. The car has also had a lower depreciation figure in recent years.

The front seat on the Terraplane has a shoulder-width of 55 inches, and when fitted with the "Electric Hand," eliminating the gear lever, the car actually does provide front seat space for three passengers. Rear seat width is average. Vision is poor to the rear but average or better in other directions, and corner posts are much less

objectionable than in most cars. Forward extension of the roof prevents undue heating and glare from the sun. Luggage space is slightly less than average, and the "trunk" (luggage-space door with a bulge in it) is overpriced.

Though the car steers slowly it steers well, and it handles well, especially under hard braking. This is due largely to the support of the front axle by radius rods. On all Hudson-built cars, the emergency brake, should the service brake fail, is applied by further

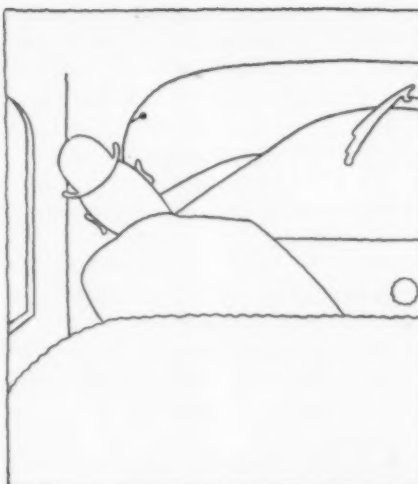
pressure of the brake pedal, as well as by hand-lever—a worthwhile safety feature. The hand-lever, located under the instrument panel, is especially easy to release. A Hill Holder, which, once the car has been stopped on upgrades, keeps the brakes applied until the clutch is released, is an available extra, for those who find starting on a hill difficult. "Electric Hand" is available at \$22.50 extra. It may be a safety feature for some drivers in city traffic. But it is a complicated mechanism and should be purchased only where the service facilities are adequate. Both automatic choke and voltage control are available as low-priced extras, and we recommend that the latter be obtained since there is no indication of charging rate on the *Terraplane* instrument panel.

Riding qualities are good front and rear. They are aided by good shock-absorber control (*Hudson-Terraplane* adopted the "airplane" type in 1934). Durability of the present *Terraplane* engine is fairly well established, despite a very high rate of piston travel. Hudson-built cars are among the lightest in the industry for their size, but we are of the opinion that their stamina is adequate if they are not abused. The car is fairly simple to work on, and does not use hypoid gears. CU's test gave the *Terraplane* an average of 17.6 miles per gallon; the results of the Gilmore Economy Run are, relative to the showing of comparable cars, more flattering.

Plymouth De Luxe Model P-4 (Chrysler Corp.). Del'd Detroit, Mich., \$745 [\$715]. Del'd NYC \$779 [\$749]. Trunk model \$10 extra.

Engine and chassis of this car remain substantially unchanged for 1937, except as noted below, but bodies are new. Comments on *Plymouth Business* as to body design and inside dimensions apply to the De Luxe model.

Windshield corner posts have larger curves than last year. In conjunction with the ventilating pane, they obscure oblique vision, for persons above medium height, to a hazardous degree. Vision otherwise can be rated as good. The whole body is mounted on rubber spools, shutting down road and engine noise, but noticeably decreasing the



SURPRISE! (BUT IT MIGHT NOT ALWAYS BE FUNNY)

car's apparent rigidity on rough roads.

Due in part to the use of direct-action shock absorbers this year, *Plymouth* riding qualities are very good front and rear, though for fast driving stiffer springs might be preferable. The comments on *Plymouth Business* steering and braking apply to the De Luxe models also, except that the car does not handle so well, probably owing to differences in springing.

Plymouth durability in other respects may be rated as good. Few changes in the engine, which is fitted with voltage regulation but not with automatic choke, have been required since its introduction in 1932. The hypoid rear-axle gears are of course an exception to any statement of durability. Operating economy should be good; mileage on the CU test was 19.42 miles per gallon at 37.1 miles per hour average speed. Attention has already been called to the economy equipment available on *Plymouth* cars. The car is fairly easy to work on.

Were it not for the front suspension, the likelihood of "flutter" on rough roads, the bad corner posts, and what is considered by some engineers to be bad weight distribution, this car would rate as a *Best Buy* at its price.

Ford V-8 85 H. P. De Luxe Model 78 (Ford Motor Co.). Del'd Dearborn, Mich., \$708.50 [\$648.50] (plus Federal tax). Del'd NYC \$773 [\$711]. Trunk model \$25 extra.

This is basically the same car as the *Standard* 85 H. P. V-8. The De Luxe equipment includes a chrome radiator grille, chromium strips and plating

here and there, a "flexible" steering wheel, other minor items. It has double horns, windshield wipers and tail lights (which can be obtained as a group on any *Ford* model for \$18.50), and considerably more wool content in the upholstery. Save for the added durability of the latter, and the slight added protection of extra wipers, horns and tail lights, this car has no advantage over the *Standard* model, shares its defects, and it does not have the *Standard*'s low price to recommend it.

Chevrolet Master De Luxe 6 (Chevrolet Motor Co., Div. of General Motors Corp.). Del'd Flint, Mich., \$739 [\$672]. Del'd NYC \$776.25 [\$709.25]. Trunk model \$18 extra.

Chevrolet cars, not "completely new" this year, do have a new motor, a new body, a new frame, and the hypoid rear-axle gears. The body (all-steel) is similar in construction to other General Motors bodies, but differs in appearance and size. Dimensions are smaller than average, usually by fractions of an inch (front cushion, 47 inches, rear cushion, 45 inches). Seats and doors are lower, rear elbow room less, and corner posts less of an obstruction than on many cars; vision is excellent through an undivided rear window, average in other directions. Sedan bodies without trunks carry the spare tire exposed at rear, and have luggage space "accessible" from inside the car—a feature discarded by two makers within the year. On trunk models the tire is carried inside the trunk. The rear floor, even with the hypoid gears, has a low tun-

nel and, in addition, a pressed-in footrest.

The roadability of the De Luxe model, much improved over last year, is good except on corners. The car steers easily but with much turning. Its riding qualities are fair to good, but the margin of superiority once held over competitive cars in this respect has been lost. Brakes are powerful, but rather difficult to apply gently. The car behaves satisfactorily under them.

Many careful changes in the *Chevrolet* engine have made it much quieter and smoother and should increase its durability. The valve-in-head feature, which makes carbon removal expensive, has been retained. The increased axle ratio used in the De Luxe model, which, in connection with a weight reduction of 175 pounds, gives the car outstanding performance, has negated most of the increase in durability and more than offset an alleged increase in carburetor efficiency. Based on CU's test of the Master model, which carries a much reduced rear-axle ratio, and on factory data, the De Luxe should give about 17 miles per gallon when touring at 40 miles per hour. A smaller carburetor is offered for *Chevrolet* commercial fleet cars, where economy

counts, and we recommend a strong effort to obtain it. Its effect on performance is slight. The car carries a normal choke. In place of voltage regulation, an initial movement of the light switch increases the charging rate.

We have never considered the rear-axle and spring-saddle construction of *Chevrolet* as satisfactory; it is continued this year, and the adoption of hypoid gears makes the question of durability in that section of the car more dubious still. The De Luxe is not geared for low engine speed, which will impair its durability.

Chevrolet Master (Chevrolet Motor Co., Div. of General Motors Corp.). Del'd Flint, Mich., \$667 [\$607]. Del'd NYC \$704.25 [\$643]. Trunk model \$18 extra.

Differences aside from minor differences of trim, etc., between the *Chevrolet Master* and the *Master De Luxe* described above are few but important. The Master takes the place of last year's Standard. It is the low-priced car of the Chevrolet line, selling along with *Plymouth Business* and *Ford 85 H. P. Standard*. In the interest of economy and durability, the rear-axle ratio on the Master is reduced to 3.73 to 1,

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allowing the car—which has ample performance and runs very smoothly—to average 18.9 miles per gallon on CU's road test. There is a manual choke; voltage regulation the same as on the De Luxe.

This model does not have knee action; it employs semi-elliptic springs all around, which may be too soft. It was precisely the difficulty of providing both a good ride and satisfactory steering with this construction which led to the adoption of independent springing and other expedients mentioned in the introduction to these ratings. Roadability of the 1937 Master would, due to design improvements made over the 1936 car, rate as good were it not for the bad effects of poor shock-absorber control, and the feature above mentioned. The entire running gear is thus far from "completely new," especially in its behavior. To this is added the unsatisfactory rear-axle construction mentioned in discussing the *Master De Luxe* model, plus the hypoid gear with its lubricating problem.

Mainly because of the differences in front-wheel suspension and steering mechanism, the *Chevrolet Master* is greatly inferior to the *Master De Luxe* as regards ease of handling and riding.

Not Acceptable

Graham Crusader 85 (Graham Paige Motors Corp.). Del'd Detroit, Mich., \$770 [\$690]. Del'd NYC \$805 [\$725]. Trunk model \$25 [\$30] extra.

The *Crusader* is the only car reported on in this issue which carries a wood-and-steel body with a soft fabric

roof. Without subscribing to all safety claims made for steel bodies, there is little reason to doubt that they are in some degree safer. Study of wrecked cars bears this out.

Body dimensions of the *Graham Crusader* are scant (front body width, 45.5 inches, rear cushion, 45.5 inches). Seats are uncomfortably close to the

floor, luggage space is small, the body in point of design is two years old. Upward vision is fair, downward good, to the rear poor. Handling is good, riding qualities fair to good. The engine is small, accessible, and economical in operation. It is equipped with neither automatic choke nor voltage regulation.

Medium-Priced Group (\$859-\$977)

Best Buy

DeSoto Model S-3 (Chrysler Corp.). Del'd Detroit \$870 [\$830]. Del'd NYC \$911.50 [\$871.50]. Trunk model, \$10 extra.

The *DeSoto* is a newcomer among the cars covered in CU's listings, reduced drastically in price over last year so that even the 4-door sedan with overdrive delivers for less than \$1,000. The 1937 car carries a smaller-

volume engine of the same horsepower as its predecessor. It is the lowest-priced Chrysler-built car with coil-spring front suspension and an overdrive, the latter costing \$35.50 extra.

The *DeSoto* body is similar in dimensions, save for a few inches more legroom, to *Plymouth*, and in quality of trim to *Dodge*. It has the same defects of driver-vision as the *Plymouth*,

plus a longer hood which impairs downward vision. Brakes are of the same size, but the behavior of the car under severe braking is better. Riding qualities are excellent, front and rear. With the exception of bad wheel-fight on rough turns in the car tested, the steering, which is easy and moderately fast, is very satisfactory. Roadability may be rated as good, though the car

is a trifle nose-heavy. The car tested (which was without overdrive) was very quiet.

The front suspension on *DeSoto* is safer and should give less trouble than the construction used on *Plymouth* and *Dodge*. Durability in other respects is similar, and will be very considerably increased if the overdrive

is installed and used. So will the gas mileage, which was 18.73 per gallon on CU's test, at an average of 37.1 miles per hour. This was with an axle ratio of 4.11 to 1; when equipped with overdrive, the axle gearing is changed to 4.3, increasing the performance and throwing the responsibility for economy on the overdrive,

which gives a ratio of 3.11 to 1. *DeSoto* carries an automatic choke and voltage regulation. It has hypoid gears, and the usual reservations concerning them apply here.

The *DeSoto* with overdrive represents, in our opinion, the best combination of qualities for all-round use of any car in this price group.

Also Acceptable

(In estimated order of merit)

Pontiac De Luxe 6 Model 37-26-CA (Pontiac Motor Division, General Motors Corp.). Del'd Pontiac, Mich. \$836 [\$785]. Del'd NYC. \$881 [\$830]. Trunk model \$25 extra.

Design of the 1937 *Pontiac* has been thoroughly renovated, all last year's similarities to *Chevrolet* (Dubonnet suspension, rear-end construction, etc.) removed. *Pontiac* is the lowest priced unit carrying the larger General Motors all-steel body used on all makes up through *LaSalle*, and the lowest with exposed coil-spring suspension. Seating dimensions are liberal, and vision, except for the obstruction of pillars, good. Floors are flat, though with some crown. In common with all other cars carrying this body, the luggage-space door (on no-trunk models) rises only to the height of a man's chest, making loading inconvenient.

Car balance of the *Pontiac 6* is good. Action under braking, due to the springing used, is very good, and the brakes are powerful. Steering is easy, but requires much turning. The riding is fairly "soft," very good front and rear, thus making the roadability not quite as good as that of *Oldsmobile*, which has a nearly identical chassis but stiffer springs. Direct-action shock absorbers are used at the rear only.

Considerable change in the engine has been made, including an increase in cylinder volume. The pistons (which are too heavy) travel at a reduced speed, and that is favorable to durability, as is also the lower engine speed per mile. A very dubious construction of the driveshaft permits the low floors; hypoid gears are not used. For service which is not severe, we feel that durability is adequate. Automatic choke and voltage regulation are included.

According to the makers, gasoline

mileage at 40 miles per hour is between 20 and 21 miles per gallon under ideal conditions. Average stop-and-go usage will write this figure down by 25%. A reduced, or "Plains," rear-axle ratio, as well as an increased or "Mountain" one, is obtainable at extra cost.

We rate the *Pontiac 6* ahead of *Oldsmobile*, to which it is very similar in body and chassis, because of its lower price and its more moderate—and, therefore, somewhat less costly—performance.

Oldsmobile 6 Model F-37 (Olds Motor Works, Division of General Motors Corp.). Del'd Lansing, Mich. \$875 [\$825]. Del'd NYC., \$925 [\$875]. Trunk model, \$25 extra.

As with *Pontiac*, the 1937 *Olds 6* has a new body and frame. It offers a novel cast grille, together with considerable re-design of engine and other parts. Comments and dimensions on the *Pontiac* body apply to the *Olds* also. Vision downward from the *Olds* front seat is better than last year; to the rear, not quite so good. There is serious obstruction by windshield corner posts.

In common with most 1937 cars, the new *Olds* rides less "softly" than its predecessor—in fact, little better than a well sprung car without knee action. A certain unpleasant stiffness in the ride is attributed to the fact that two anti-sway bars are used and direct-action shock absorbers are not. Control and roadability are definitely superior to last year. Steering is easy, requiring a medium amount of turning. Behavior under brakes, very good; car balance, good; frame rigidity, excellent. Quietness, fair to good.

The rear axle has been strengthened

to handle increased power. Hypoid lubricant, with its attendant difficulties, is specified for the gears used, although hypoid gears are avoided by using a driveshaft with three universal joints instead of two, which has more disadvantages than advantages. While the engine has been changed in the direction of durability in the same manner as *Pontiac*, and its volume increased, the changes render difficult any forecast as to freedom from trouble. The engine carries both voltage regulation and automatic choke.

Oldsmobile operating economy is only fair. Performance is outstanding at moderate speeds, and this must be paid for. In CU's test, mileage per gallon was 17.44 at 37.2 miles per hour average speed. The car has more power than is needed for average use; and, while it is a better car in some ways than in 1936, it does not occupy quite such a favorable position in relation to other cars in its price class.

Studebaker Dictator 6 (Studebaker Corp.). Del'd South Bend, Ind., \$880 [\$850]. Del'd NYC, \$947 [\$916]. Trunk model, \$20 extra.

The *Studebaker Dictator* is carried into 1937 with only minor mechanical changes. It has a new front (which is not die cast), a hood with quick-detachable sides, direct-action shock absorbers, a better crankshaft, a driveshaft with rubber universal joints which has had successful use abroad, and hypoid rear-axle gears. The rear floor is flat. Front cushion is narrow, 46 inches; rear cushion, 47 inches. Vision upward and downward has been improved; to the rear it is likewise good. Corner posts will cut off vision for tall drivers. The hand of the speedometer is very hard to see. A rotary door-latch permits closing the doors with a gentle

push, and is claimed to banish rattles at this point.

After further study, Consumers Union recommends the Planar front suspension which is offered on *Studebaker* cars at \$20 additional. It gives better riding qualities in front and much better in rear than conventional springs, and handles well on curves without the stiffening of anti-sway bars. A steering gear which increases its leverage for parking gives the *Studebaker* excellent steering control, and car balance is very good. The brakes would appear to be undersized for long wear; they apply with a firm feel, however, and are sufficiently powerful. The Hill Holder which was used on this car last year is continued (see *Terraplane* above).

The engine, fitted with an automatic choke but no voltage control, is of moderate volume, and makes a higher than average number of revolutions per mile, thus giving very able performance at low car speeds, with the apparent intention that the overdrive (\$45 extra) should be used for extreme high speed. On CU's test, the *Studebaker* without overdrive averaged 18 miles per gallon at 36.9 miles an hour average speed. Operation was very quiet.

We would rate the *Studebaker Dictator*, when used with overdrive, and for those to whom price is secondary, at the top of the *Also Acceptable* list. Without overdrive but with the Planar suspension, we consider it an excellent family car, and rate it as third of the *Also Acceptable* cars in this group.

Super Terraplane Model 72 (Hudson Motor Car Co.). Del'd Detroit, \$865 [\$815]. Del'd NYC, \$906 [\$858]. Trunk model, \$20 extra.

The *Super Terraplane* is virtually a de luxe model of the *Terraplane De Luxe* carrying the usual extra trim and fittings. The engine, however, is fitted with a dual carburetor and manifold, which should improve gasoline economy slightly and aid low-speed performance. Reduced axle ratios are available, for those who value increased durability and economy more than they do performance. "Electric Hand" may be had for \$22.50 extra.

While the *Super Terraplane* has the same advantages in design as the *Terraplane De Luxe*, it is less outstanding at the relatively high price asked for the *Super* model.

Chrysler Royal 6 Model C-16 (Chrysler Corp.). Del'd Detroit, \$910 [\$870]. Del'd NYC, \$954 [\$914]. Trunk model, \$10 extra.

This car differs from *DeSoto* in having different frontal appearance, trim, instruments, and shock absorbers, and in having an aluminum cylinder head. It is likewise available with overdrive, for which a charge of \$35 is made. It is in effect a de luxe *DeSoto*, sharing all *DeSoto's* advantages at a price approximately \$40 higher.

Hudson 6 Model 73 (Hudson Motor Car Co.). Del'd Detroit, \$935 [\$885]. Del'd NYC, \$977 [\$924]. Trunk model, \$25 extra.

The *Hudson 6* employs the *Hudson 8* chassis, in which the *Super Terraplane* engine is mounted with its center of gravity unusually far to the rear. The result is excellent car balance and roadability. Since the frame was designed to support a heavier engine, its rigidity is likewise excellent. The body is the same in size as *Terraplane*, but carries a better grade of upholstery and trim. Except for the obstruction of a longer hood, all *Terraplane* ratings on vision and body space apply to this car. *Hudson 6* rides better than the *Terraplane*, being rated in this as very good. Steering and braking are similar, as are the front-axle construction and other features.

Pontiac De Luxe 8 Model 37-26 CA (Pontiac Motor Division, General Motors Corp.). Del'd Pontiac, Mich., \$894 [\$848]. Del'd NYC, \$941 [\$895]. Trunk model, \$26 extra.

This car carries the same body as the *Pontiac 6*, and all comments made in discussing the *Pontiac 6* regarding seating space, vision (except for the added obstruction to downward vision of a longer hood) and luggage space apply equally to the *Pontiac 8*. Wheelbase is 5 inches longer to accommodate the 8-cylinder engine.

The roadability, handling, and braking of this car are similar to the *Pontiac 6*. Riding is slightly better, and the car is quieter.

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As with the 6, the engine of the 8 has been redesigned this year, though the improvement did not extend to a dual carburetor, which all other makers consider necessary for efficiency with 8 cylinders, and in fact the *Pontiac 8* is not distinguished for its efficiency. Partly because its power is not extreme, partly because of design, the engine should be very long-lived. It has one forte, which supplies the only reason for purchasing it in preference to the *Pontiac 6*: it operates more smoothly and durably at high level-road speeds. Even this characteristic may be improved by obtaining it with the "Plains" (reduced) ratio, in which case normal-speed performance is substantially that of the *Pontiac 6* with regular ratio. The 8 will give a mile or so less per gallon than the 6 at constant speed. It should be borne in mind that a large engine is always more greedy of fuel in traffic and in warming up than a small one.

Dodge 6 Model D-5 (Dodge Brothers Corp., Division of Chrysler Corp.). Del'd Detroit, \$820 [\$780]. Del'd NYC, \$859 [\$810]. Trunk model, \$10 extra.

Comments on *Plymouth De Luxe* apply generally to *Dodge* also. The *Dodge* trim is, however, better. Chassis is 3 inches longer. The engine is slightly larger in volume, giving a small advantage in performance.

With respect to the front axle and spring construction used on *Dodge*, to which the car's low rating is chiefly due, it may be noted that 1936 *Dodges* were particularly inclined to "wander." This unpleasant feature has not been entirely eliminated by 1937 design changes.

Dodge carries the lowest price in the present group, but this fact should not be allowed to outweigh the disadvantages mentioned above.

Nash-Lafayette 400 Model 3710 (Nash Motors Co.). Del'd Kenosha, Wis., \$810 [\$765]. Del'd NYC, \$871 [\$826]. Not available without trunk.

This car, which takes the place of last year's *Lafayette* and *Nash 400*, carries an all-steel body of new design. The same body is used on other *Nash* cars as well. Dimensions are liberal;

the fact that a full-sized bed may be made up inside the car is proudly stressed by the makers.

Vision can be rated good for front and rear, and fair downward, except to the right. Riding qualities may be rated as good in front, very good in the rear seat. There is a low tunnel in the rear floor (hypoid gearing is not used). Instruments have better than average visibility.

Braking power is satisfactory. The car steers with medium ease and with much turning. Reaction of the car to braking and steering control on rough roads betrays unsatisfactory front-end design. Nash uses soft springs in front, with a "kick-shackle" to absorb road shocks in the steering gear. The result is a front system with the same defects as have the *Plymouth* and *Dodge*. Aside from this, the balance of the car is only fair; it is made "nose-heavy" in order to improve the ride.

Cost of maintaining the front-end construction will probably be high. In regard to other items the construction and, presumably, the durability can be considered standard. Automatic choke, and voltage regulation are not used. The *Nash-Lafayette* has the largest engine volume, and the lowest compression ratio, of any car listed. Even so, owing to the construction of the engine, in which the temperature of the ingoing gas is perhaps better controlled than in other engines, the operating economy should be fairly good, and with overdrive in use should be very good. Overdrive (*Nash-Lafayette* is the lowest priced car on which it is available) is \$45 extra.

Graham Cavalier Model 95 (Graham-Paige Motors Corp.). Del'd Detroit, \$905 [\$875]. Del'd NYC, \$940 [\$909]. Trunk model, \$30 extra.

The *Graham Cavalier* carries a steel body with set-in steel roof, and is thus not open to the objection made to the *Crusader* model, above. Seating dimensions are normal, except that the seats are uncomfortably close to the floor, which is without a tunnel but crowned. Hypoid gears are not used. Obstruction of oblique vision by the corner posts is, for drivers above medium height, very bad.

The car carries brakes which are heavily loaded, but which apply with a firm feel and stop the car well.

Steering control is good, requiring a medium amount of turning. Front-end construction, however, involves the use of very soft leaf springs and is unfavorably regarded. Roadability of the car may be rated as good; riding qualities, good in front and fair to good in rear.

This year's car has provision for direct lubrication of the cylinder walls, which is especially valuable during the warming-up period. There is neither

voltage regulation nor automatic choke. Operating economy, owing to a small engine with high compression ratio, is excellent. Note that this car finished second in this year's Gilmore Economy Run Sweepstakes. Overdrive is available on this car at an extra cost of \$45. Strictly on the basis of operating economy, the car is an excellent purchase, but its cost is particularly high, and the resale value of 1935 and 1936 models was lower than average.

The "Sitdown"

LAST JUNE IT WAS PREDICTED IN *Consumers Union Reports* that "1937 will be the critical year for automobile workers." As we go to press, the big strike is over and collective bargaining between the automobile workers union and General Motors has started. It seems likely that Ford and Chrysler will be the next objectives of the CIO-supported United Automobile Workers of America. A demand for collective bargaining with the Chrysler Company, in fact, has already been made by the Union.

There seems to be general agreement among labor observers that the General Motors strike was a victory of first-rate importance for the automobile worker. Blanket recognition was not won. Realistic labor leaders hardly hoped for that much. The significant point is that General Motors abandoned its first- and second-line trenches by recognizing the union and starting collective bargaining while the sitdown strikers were still in its plants, and by agreeing to deal simultaneously for all General Motors plants. Nor was the union dismayed by the immediate granting of a 5-cent hourly increase.

Still more important to labor generally is the establishment of the sitdown strike as labor's most powerful weapon. Strikebreakers and professional thugs cannot easily take over a plant and beat up men who remain at the machines. Employers everywhere may be expected to follow the lead of General Motors in denouncing sitdowners as a menace to law and order, private property and, perhaps, Ameri-

can motherhood. But their pleas would ring more convincingly if they came into court with clean hands. General Motors saw nothing unethical in obtaining help from a judge who was a large stockholder in General Motors; nor in spending almost a million dollars on labor spies; nor in destroying its extensive records of espionage work by the Pinkerton Agency when the LaFollette subcommittee sought them for its investigation.

From a labor lawyer *Consumers Union* has obtained this comment on the sitdown strike:

"The sitdown is nothing but the extension of the picket line to the machines. It is the strikers' answer to denial of civil rights on the picket line—with the customary concomitance of drastic injunctions and professional violence—and to the refusal of large corporate employers to recognize their employees' unions.

"From the public's standpoint, the sitdown deserves consideration as a proved method of eliminating violence from major strikes. A sitdown can always be terminated by any employer who is willing to sit down with his employees, around a table, for collective bargaining."

France, incidentally, has been given undue credit for the origin of the sitdown. The technique is not a European importation. There have been minor uses of the sitdown in strikes for a number of years, both in this country and abroad. But the strategy was first employed on a large scale, and with considerable success, by the rubber workers of Akron, Ohio.

CONSUMERS UNION reports—

(Continued from page 2)

ment need not report for prosecution "minor violations." Government officials, with whom manufacturers have judiciously established the most friendly relations, should not be given the power to decide what constitutes "minor" violations. It is much like giving policemen full discretion not to arrest in cases of "minor" homicides.

To climax this legislative sell-out, the bill encourages manufacturers to go to the courts to get injunctions against enforcement. It does this by facilitating application for injunctions on the grounds that a "regulation is unreasonable, arbitrary, or capricious, or not in accordance with law, and that the petitioner may suffer substantial damage by reason of its enforcement." Unlike injunctions against false advertising, such injunctions would be readily obtainable; for in countless instances the courts have shown that when they balance the consumer's welfare, even his health or life, against business profits, their concern is likely to be for the profits. In most courts, property rights are still above human rights.

The Copeland bill will not protect consumers. Neither will the companion bill introduced in the House by Congressman Chapman of Kentucky, which is in some respects better, and in some worse than the Copeland bill. Members of Consumers Union and any organizations with which they are connected should wire or write the President and their representatives in Congress, demanding the scrapping of this fraudulent legislation and the enactment of legislation which will really give the consumer the protection he needs.

Consumers Union's attorneys are now working on both Federal and State food, drugs and cosmetics bills, which will soon be presented for official consideration. Copies of both of these bills will be available to those interested.

MINERAL-OIL NOSE DROPS (CONT'D)

In the December *Reports* we called attention to the very definite dangers involved in the use of mineral-oil nose drops. In January we sent letters on the subject to several manufacturers of these products and to a number of magazines carrying their advertising (see the January-February *Reports*). So far two answers have come in: from R. H. Macy & Co. of New York City, which sells its own brand; and from Curtis Publishing Co. (*Saturday Evening Post*, *Ladies' Home Journal*, *Country Gentleman*). We publish them both below, by way of illustrating two very different responses to our suggestion that the consumer deserves protection from a product which might cause death.

... It has always been the policy of this Company to investigate the products advertised in our publications. You no doubt appreciate that strict regard for the interests of our readers in this respect is in no small measure responsible for the confidence our readers place in both our editorial and advertising pages.

We will continue, therefore, as in the past, to accept advertising of reputable manufacturers on products which, in our judgment, are suitable for our pages.

Needless to say, we will continue to reject the advertising of those products which we feel are not suitable.

We trust this makes our position clear.

Curtis Publishing Co.
Philadelphia, Pa.

Fred A. Healy
Advertising Director

After receiving your letter . . . we made an investigation of our product, "Macy's Nose Drops". We concluded that it would be desirable to state on the labels of these nose drops the following language:

Front Label on Bottle: "Macy's Nose Drops with Ephedrine 1%, New York."

Back Label on Bottle: "Macy's Nose Drops with Ephedrine 1%."

"Directions: Adults: Tilt head back and place a few drops in each nostril or spray into the nostrils with atomizer as directed by physician. Not to be used for infants or small children except by physician's direction."

The important change which we have made in the language on the label is in pointing out clearly that the preparation should be used under the direction of a physician, for adults and children. The instruction concerning the use of the preparation under the direction of a physician will be printed in prominent, readable type.

We again assure you that we appreciate the information contained in your letter. . . .

R. H. Macy & Co.
New York City

Howard Otten
Exec. Vice-President

HAND LOTIONS—A CORRECTION

In the January-February *Reports* the following hand lotions were cited as containing carbolic acid and hence rated "Not Acceptable": *Woodbury's Almond Rose Cream*, *Jergen's Lotion*, *Hess Witch Hazel Cream*, *Nepto Lotion*.

The test used (an official test prescribed in the U. S. Pharmacopeia for determining the presence of carbolic acid) gives a similar reaction to chemically related substances, including salicylic acid and resorcinol. And it may also fail to show the presence of carbolic acid in some instances. Retest by other methods gives the corrected listing below:

Not Acceptable

Campana's Italian Balm. Contained carbolic acid.

Woodbury's Almond Rose Cream. Contained salicylic acid, which, applied to the skin, may cause local irritation.

Hess Witch Hazel Cream. Contained salicylic acid.

Nepto Lotion. Contained salicylic acid.

Jergen's Lotion. Contained resorcinol, which may have an irritating action on the skin.

Due to a typographical error in the same listings, the small size bottle of *Frostilla* was given as containing 6.5 fluid ounces. The figure should have read .65 fluid ounce.

